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# THE AMERICAN NEPTUNE

A QUARTERLY JOURNAL OF MARITIME HISTORY

1949
JULY

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# THE AMERICAN NEPTUNE

A QUARTERLY JOURNAL OF MARITIME HISTORY

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# THE AMERICAN NEPTUNE

*A Quarterly Journal* *of Maritime History*

VOLUME IX JULY 1949 NUMBER 3

A LETTER *recently received from Captain W. R. Chaplin of the Trinity House, London, suggests that a note be published inviting a contributor to prepare an account of the stern-wheel vessels* Harvest Queen *and* Oklahoma *on the Columbia River. Captain Chaplin writes: 'For many years these two vessels towed practically all the sailing ships between Astoria and Portland, Oregon, and it was a great sight (and was no mean feat of seamanship) to see them handling two large sailing ships, one on each side, on the 100 mile tow and then moor them at their respective berths at Portland. I have seen them mentioned in personal reminiscence, but an account of their careers and work would be worth recording, as it is a phase of work which has gone forever. The volume published some time ago on steam vessels on the Columbia River only has a passing reference to them.'*

*Captain Chaplin's article in the October 1944 issue on the ship models owned by the Trinity House, destroyed in the German air raid on the night of 30-31 December 1940, contained photographs of models of four early light-vessels. This led Mr. Nevitt to contribute to the April 1945 issue a copy of the lines and the contract for a light-vessel built in 1823 by Henry Eckford. Recently Mr. William A. Baker, searching through the files of the old Union Iron Works of San Francisco, has*

*unearthed the original lines and arrangement plans for U. S. Light-Vessel No. 50* Columbia River, *built in 1891-1892. From these Mr. Baker has prepared a set of drawings, which will be published at the earliest opportunity. Captain Chaplin's account of eighteenth-century light-vessels built for the Trinity House has thus led to the Columbia River, and it is hoped that his request for information regarding the stern-wheelers* Harvest Queen *and* Oklahoma *will have equally fruitful results.*

*The Editors are grateful to the many readers who, in recent months, have so kindly distributed prospectuses of* THE AMERICAN NEPTUNE *among possible subscribers. In particular, the friendly efforts of the officers of the Naval Historical Foundation and of Mr. Storer B. Lunt, President of W. W. Norton and Company, Inc., have led to a wide distribution without cost to the Editors. Since the end of the war the number of articles submitted for publication has doubled, and if these are to appear with the desired promptness an increase in the size of each issue is necessary. This will only be possible with a corresponding increase in circulation, and consequently the Editors hope that present subscribers will continue to call the* NEPTUNE *to the attention of potential readers with the energy and good will that they have shown in recent months.*

# *The Design of the American Frigates of the Revolution and Joshua Humphreys*

*BY HOWARD I. CHAPELLE*

COMMANDER Brewington's article on the design of the American frigates authorized 13 December 1775 [THE AMERICAN NEPTUNE, VIII (1948), 7-25] is the first complete narrative of the events leading to the construction of these vessels. He has cleared up many of the mysteries surrounding these ships and their design. Nevertheless, I cannot go along with his enthusiasm for the ability of Humphreys, nor am I satisfied that he has proven that Humphreys was the designer of the 'official draughts.' This is no reflection on his research, for my objection to the evidence is based on a very technical ground, as will be seen. Nevertheless I think my chief objection is not only sound, but readily understood if properly explained—this I will attempt.

Brewington's claim in favor of Humphreys seems to rest on William Whipple's statement that Humphreys laid the plans of several ships of war before the Marine Committee some thirty-one days after the passage of the Act, for approval by the Committee. The inference drawn by Brewington is natural; since Humphreys presented the plans he must have been the designer. In addition there is a statement made by Humphreys, later in life, that he was commissioned to design and construct *Randolph,* to which Brewington gives reference but does not quote.

Brewington very properly, in my opinion, accepts the surviving plan of *Randolph* as the official design of the 32-gun ships. This was preserved by Humphreys and was used to construct the single frigate he contracted for, with Wharton. The natural assumption is that this plan was his work, the 'master-draught' which the designer normally retains as his own record. But is this true?

It is not difficult to establish evidence to identify Humphreys' draftsmanship. He was at one time a naval constructor and so a few of his plans exist. I must say that I doubt very much that his claim to have originated the building policy that produced the big American frigates of 1794-1796

will stand investigation, but this is another matter. For a designer for whom such great things are claimed, Humphreys seems to me to have produced remarkably few designs. I think it is fair to say this, as his son preserved a good deal of work which he claimed was his father's. At any rate, only a very few of the surviving plans can with certainty be said to have been drawn by Joshua Humphreys himself.

I prefer to base my attempt to identify Humphreys' plans on draftsmanship alone. I do not feel wholly competent to depend upon handwriting identification and many plans are assigned to Joshua Humphreys by writing on their face that I am doubtful is his; I suspect it is his son Samuel's, who appears to have served as his apprentice and draftsman at one time. I have passed over the plans whose identification would have to be based on such assignment alone, in favor of a plan that can be accepted with certainty.

I believe the draftsmanship of a naval architect can be readily identified if a few plans known to be his work are available as a basis for study. The actual drawing; neatness, methods of joining curves, the weight of line used, shading, and the freehand work are recognizable features. The method of design also follows a set pattern: the form of the cutwater, midsection, ends of the drifts, shape of the headrails and idiosyncracies of decoration, station spacing, use of certain fairing lines; these are matters of individual taste, opinion, and habit that do not change much in a professional lifetime.

I say Humphreys was not a very good draftsman compared with his contemporaries. I base this on Plate 17, his drawing for the design of the 74-gun ships authorized in 1798-1799 (which were not built). This plan is most certainly Joshua Humphreys' work; he says so and so do both Fox and Doughty. Also plans of the same design were made by Hutton, Doughty, and Samuel Humphreys, so comparisons could be made to show how the draftsmanship of these men differed from that of Joshua Humphreys. Plate 18 is a design of a merchant ship, *Illustrious President*, which has on it written evidence that it was a design by Joshua Humphreys. However, the writing appears, to my amateur judgment, to have been Samuel Humphreys' and the draftsmanship is too sketchy to aid much, so I hesitate to offer it as evidence for other than support of my previous statement about the doubtfulness of certain plans being actually the work of Joshua Humphreys (though credited to him in writing on the drawings). It is this type of drawing that I have passed over as identification.

Now, Humphreys has been given the credit for the design of the *Con-*

*stitution* and *Constellation* classes. However, all the plans that have been quoted as supporting this were drawn by Fox or Doughty, with the credit line for Joshua Humphreys obviously added at a later period, in the hand of another person than the draftsman. This is apparent I believe, even to an unpracticed eye. Actually, my chief reason for being certain of this is that in some cases the draftsman's name was scratched out and Joshua Humphreys' name filled in. This was probably the work of Samuel Humphreys, though there may be cases where the credit line was added by some officious clerk or copyist at a much later date. If Joshua Humphreys did design these ships there must have been a 'master draught' made by him and, under the existing circumstances, it seemed reasonable that the plans must have been preserved. I made a very careful search and found a plan of a 44-gun frigate that I think *may be* the Humphreys original. I did not find any plan of the 38-gun class and I do not think one was made by Humphreys; his co-workers probably made this design using the 44 as the basic design and changing the dimensions and details as they developed the draughts. Plate 19 is the draught of the 44-gun frigate that I think is the Humphreys original. The workmanship looks like his and the small title just forward of the mainmast may be in his hand, '*Terrible* of 44 guns'; this was one of the names recommended by Humphreys for the ships, at any rate.

I wish to express another judgment of Humphreys here; he was very truthful theoretically, but the master of innuendo that would lead to inferences to his benefit. One very good example is the letter published in the *American State Papers*[1] about the large frigates. Read this and I believe you will get the impression that Humphreys originated the idea of the large frigates and personally prepared all the designs—but he does not say so in fact. The idea of the large frigate design was not his of course; it was the decision of the War Office conferences, which may have been influenced by the Revolutionary War ship *L'Indien,* and also *Alliance* and *Confederacy*. Thus also, his papers speak of his model of a 74 of the Revolution and convey the idea that it was his design, but the existing draught and the model, when compared, cause grave doubts to arise. But more of this later.

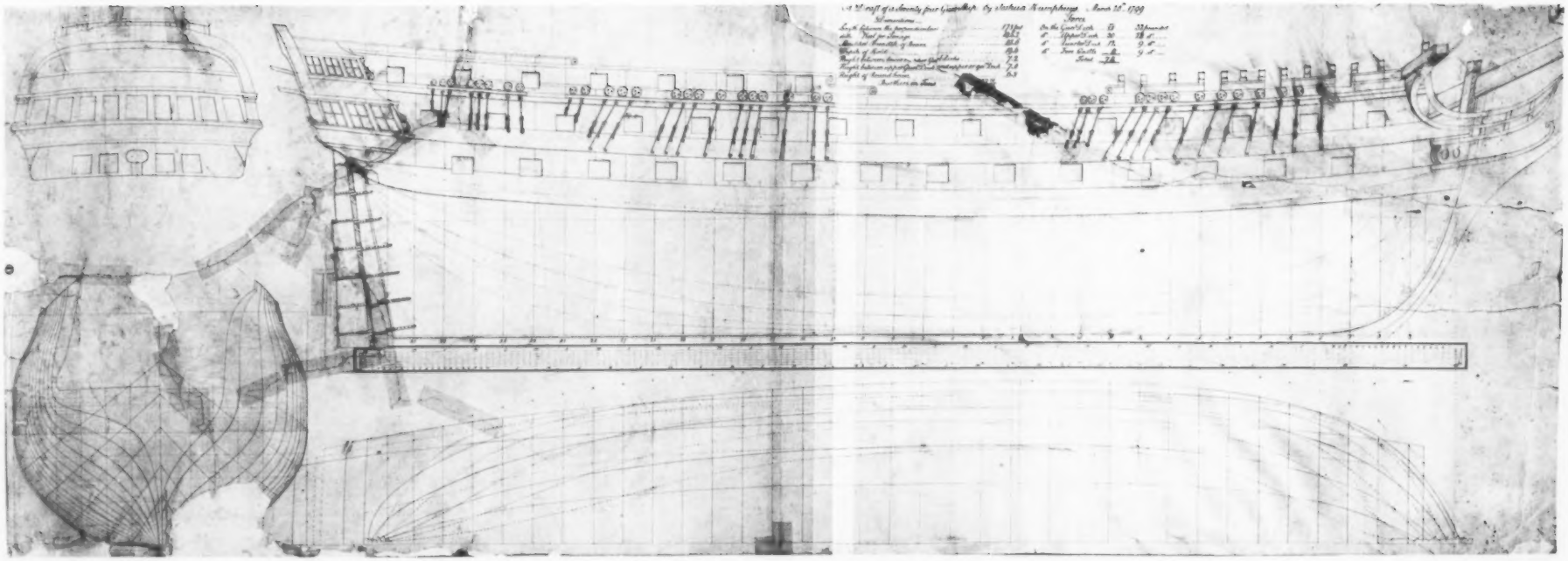
Now, compare the plans I show here with that of *Randolph,* included in Brewington's article. As a draftsman I claim it is so plain that the workmanship in the *Randolph* plan is not that of the 1799 74-gun ship and that it is self-evident that the Revolutionary War design was not the work of

[1] *American State Papers,* Class VI, Naval Affairs (Washington, 1834), I, 8.

Joshua Humphreys. I think this is so obvious that a detailed comparison is unnecessary. It might be suggested that the intervening time had affected Humphreys' workmanship; true, it might, but not enough to account for the differences exhibited in the two plans. No man's draftsmanship could possibly make such a complete change in a professional lifetime, nor does a designer so completely change his methods of fairing and design. This could be readily shown by plans of designers over a period of years, but to present such evidence would require much space and I do not think it necessary. An inspection of Samuel Humphreys' work in the National Archives will convince anyone interested. The existing work assigned to Hackett, Doughty, Fox, the Huttons, Bergh, and Coffin would be ample to identify their individual draftsmanship and to show how readily a draftsman could be identified from a plan. Actually, the plan of *Randolph* has some slight similarity in method to the work of Hackett. I am not suggesting for a moment that Hackett could have designed this ship; I do suggest, however, that the style of drafting in the plans of *Randolph* and *Essex* was colonial, therefore it is earlier than Humphreys' style. Humphreys, according to my argument, did not develop a drafting style until after the Revolution and his style is shown in both the 74-gun ship and *Terrible*. I feel that the obvious difference in the drafting style shown in these plans, as compared to the Revolutionary War drawings, very definitely raises a doubt of Brewington's otherwise well-reasoned conclusions. It is very unfortunate, by the way, that a great deal of the plan material relating to the Humphreys period now in the National Archives shows plain evidence of tampering.

I want to add that the *Randolph* drawing was not the only Revolutionary War plan preserved by the Humphreys'; there is another which I do not think Brewington had seen when he wrote his article. This is a plan[2] of a 74-gun ship, which I theorize (but cannot state with certainty) may be the official design for the *America* class of 74's, of which only this one ship was ever built. Now, Humphreys made a model of a 74; this is in Independence Hall at Philadelphia. Humphreys indicates in his papers that the model was made for the Navy Board; one naturally assumes it to be his design. His papers include a set of spar dimensions, for which I am indebted to Brewington, by the way. This set of spar dimensions was headed 'Dimentions & of a Seventy-four Gun Ship built by Joshua Humphreys for the Honable Navy Board.' The words 'a Model of' have been inserted before 'a Seventy-four' and the dimensions given coincide exact-

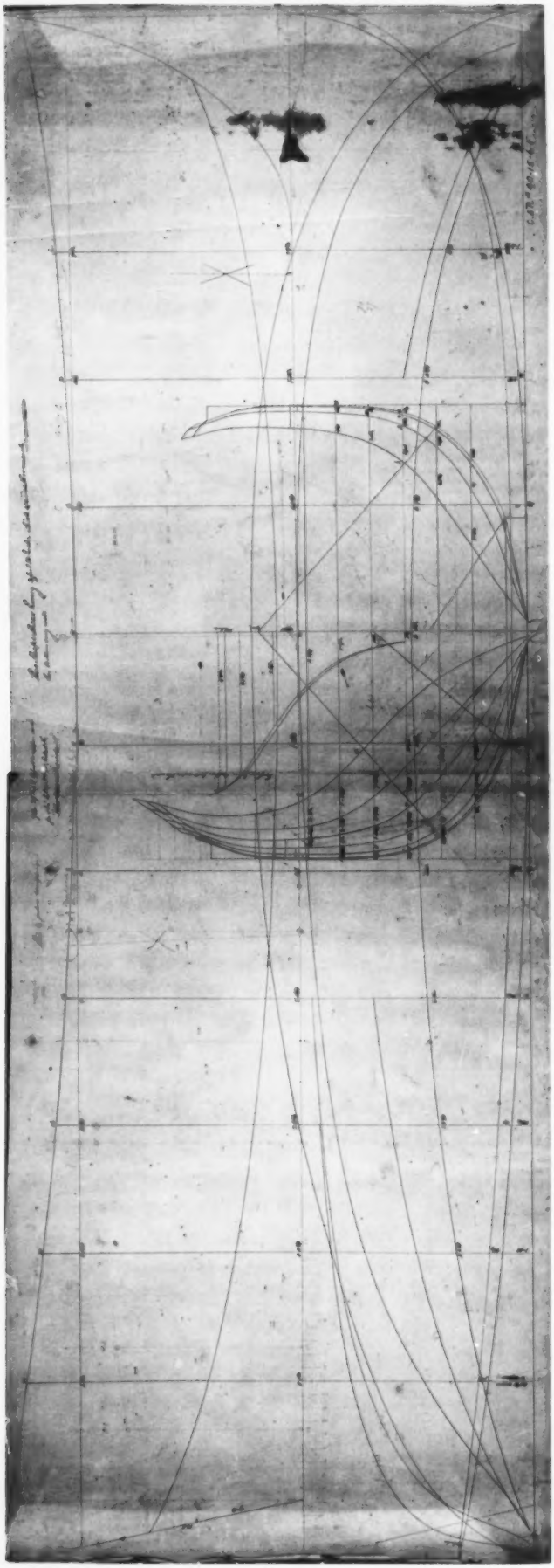
[2] National Archives, Navy Plans, 40-15-6 G; 40-15-C H.



Draught of a 74-gun ship by Joshua Humphreys

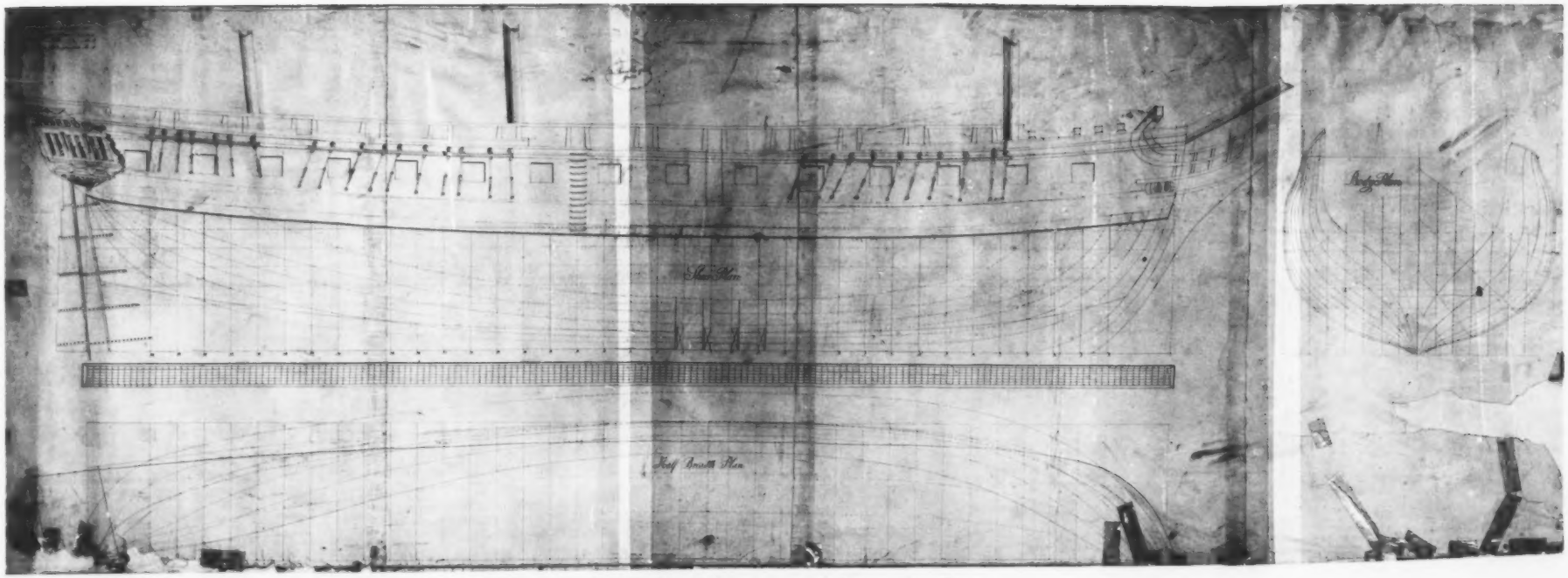
*From the Navy Department, Bureau of Construction and Repair Plan 40-15-61, The National Archives, Washington, D. C.*

PLATE 18



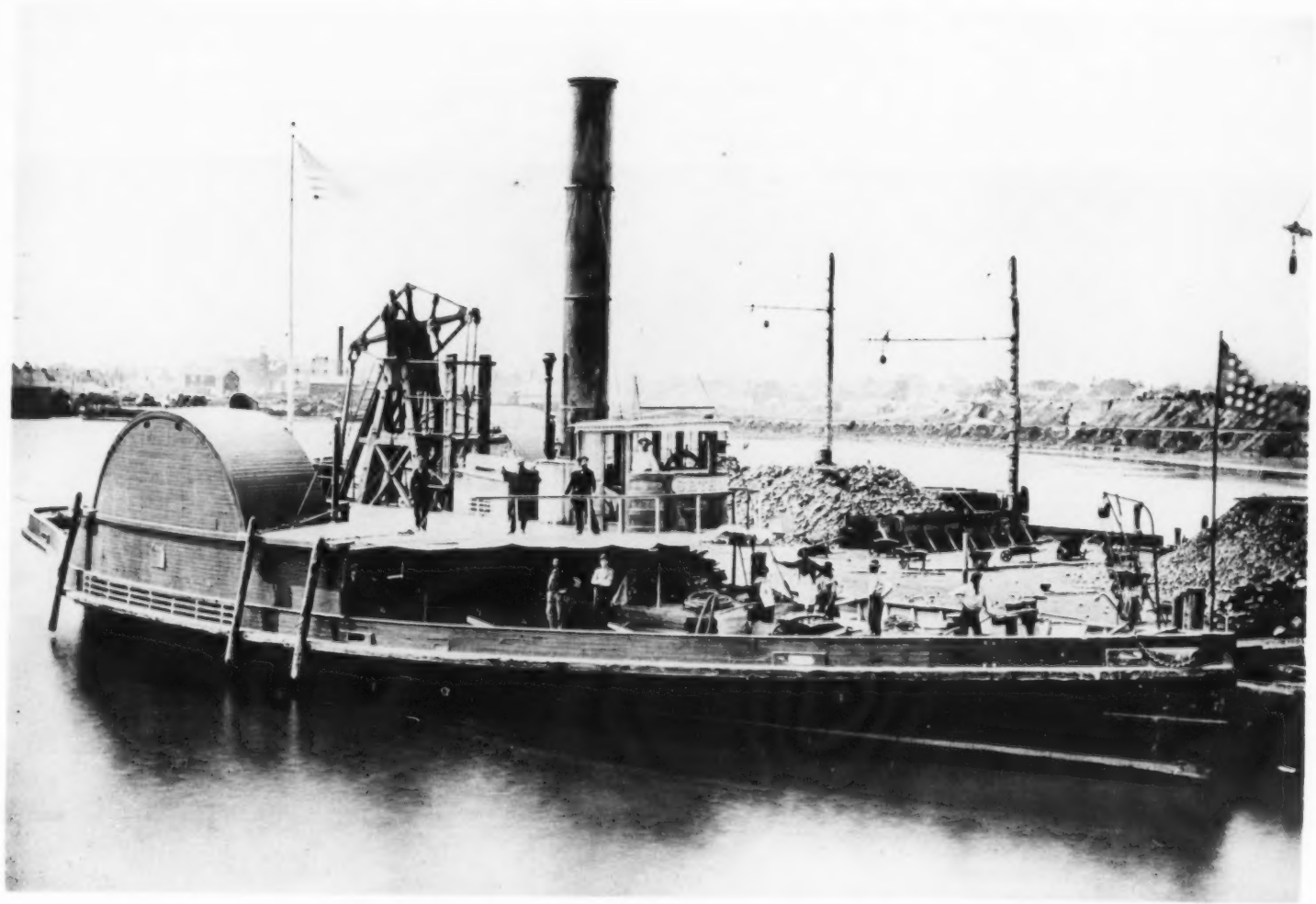
Draught of merchant ship *Illustrious President*

*From the Navy Department, Bureau of Construction and Repair Plan 40-15-6F, The National Archives, Washington, D. C.*



Draught of the 44-gun frigate *Terrible*

*From the Navy Department, Bureau of Construction and Repair Plan 40-15-64, The National Archives, Washington, D. C.*



Steam tug *Seth Low*

*From a Brady photograph in the Photographic Records Office, The National Archives, Washington, D. C. For description of the tug* Seth Low *see* THE AMERICAN NEPTUNE, *III (1943), 161-163; V (1945), 146.*

ly with those given in the surviving draught. However, close examination and some measurement of the model indicated that the drawing and model were different in the following particulars: the stern, quarter-galleries, length of poop and quarterdeck, forecastle rail length and arrangement, and the lines forward near the forefoot. My conclusion is that the model was made from the draught, but with alterations for the purpose of showing 'improvements' which Humphreys hoped would impress the Navy Board and win him a building contract. I see no reason why the model indicates he actually designed the ship, for the draught, which is obviously in the same hand as the *Randolph* plan, seems to me to be an unsurmountable barrier to such a conclusion. Also, on another count than workmanship involved in the drawing, if he made the draught why did he make the model differently?

In spite of the evidence of the letters quoted by Brewington in regard to *Hancock,* may I say (as a draftsman of some experience) that the evidence of the Admiralty draught shows beyond question that this vessel was certainly not built to the *Randolph* draught. I have drawn the plans of both ships to ¼-inch scale and I think I can pass on this matter now with some authority. It seems to me that it is a suitable place to point out that the example of the design of *Hancock* represents a characteristic of government correspondence regarding technical matters; 'administratively' speaking correspondence is prepared so that no embarrassing facts appear even though the persons involved really know the situation is snafu. What happened here is of course speculative; but the letters quoted by Brewington on one hand and the actual plans on the other show that the New Englanders went ahead with a design of their own in building the ship, without correctly informing Philadelphia. It is not what is said about the design used in *Hancock* that counts, for the survival of the plan of *Randolph* and the plan of *Hancock,* made by the Admiralty after the ship was captured by the British, is the final answer as to whether or not the ship was built to the Philadelphia plan; and the answer is 'No.'

There should be no mystery about the combination of similarities and dissimilarities of the New England ships to the official draught dimensions; the size of the three classes must have been established by Congress, or its Marine Committee, before the official designs could be prepared; the members knew what the approved dimensions were to be and proceeded with the individual designs on this knowledge. Then when the official draughts finally reached them, the builders would naturally adopt any useful features to be seen.

*From a Brady photograph in the Photographic Records Office, The National Archives, Washington, D. C. For description of the rig see* Seth Low *see* THE AMERICAN NEPTUNE, III (1943), 161–162, PLATE 20.

I do not think the differences between the *Raleigh* and *Hancock* on one hand and the *Randolph* plan on the other can possibly be explained by a claim of poor lofting. In *Virginia* we can see how the characteristic features of a design were carried out in the finished ship by the lofting methods then in vogue; the differences exhibited in the New England ships can only be explained by an independent design for each.

There might be a ready explanation of the departure of some of the New England-built frigates from the Philadelphia design in a fact that has been overlooked. This is that the accepted practice of the Admiralty, prior to the Revolution, had been to permit builders of naval ships to depart from the design furnished them under the 'establishment'; the design given the builder was for 'guidance' only, in short. This had been the practice in the Royal Navy ships built in America in the colonial period; and some of the ships had been built in New England. Is it not reasonable to assume that the New Englanders may have taken the Philadelphia design with the same grain of salt that they had been permitted with Admiralty plans?

In view of the otherwise well-documented claim made by Brewington, it is unfortunate that the plans involved do not give full support, for if they did a troublesome question would be settled once and for all. It may be well to point out that in making my argument I am presenting the opinion of a draftsman and basing the opinion on the plans, rather than on documents written by either Humphreys or any official. I think this is permissible for, in matters of ship design, it seems to me that the plans are the primary evidence. This being the case the (to me) obvious variation between Humphreys' draftsmanship and that of *Randolph* and of the Revolutionary War 74 I have mentioned seems very important.

I frankly do not know the explanation. It seems to me on the evidence of the plans that Humphreys did not actually prepare the designs in question, in spite of what he and others say. I do not have an index of the Humphreys Papers but I think I am correct in stating from memory that there is one order to Humphreys, among his papers, that in effect is a transmittal of the plan of *Randolph* with instructions not to deviate from the design. It would be interesting to publish this, if it can be found, alongside the Humphreys statement, referred to by Brewington. From my relatively slight knowledge of the Humphreys Papers it seems to me that he was somewhat prone to over-emphasize his activities. This is, of course, no more than a personal opinion.

In view of the projected publication by the Peabody Museum of Salem

of the Fox Papers it may not be out of place to suggest that the full publication of the Humphreys Papers would be a valuable contribution to American marine research. These papers would have only limited interest, of course, and so the publication can not be a commercial project. I suggest that the NEPTUNE might eventually undertake such a work and though I fear Brewington will not thank me for the suggestion, it seems to me that he would be the proper person to assemble and edit the material.

Returning to the Revolutionary frigates, and Humphreys, the material that has been made public to date must leave a doubt as to where the credit for the design of the ships should finally rest. There are certain questions that must be answered, I think, to permit final conclusions to be made. The first question is that of the plans, perhaps, to show why the plans are not in Humphreys' hand, if my claim is correct, or to show me wrong, if it can be proven that the plans *were drawn* by Humphreys. The next question is the reason Humphreys was chosen to design the ships. Logically there seems to be a reasonable question here. Humphreys was only twenty-six and just out of his apprenticeship; he had joined Wharton in operating the old Penrose yard, I believe, about a year previous. Now, there were numerous competent ship designers and builders in Philadelphia at the time, as is shown by the organization of shipwrights set up to assist the supervision of the frigates building at Philadelphia. Why, then, was a relatively inexperienced man chosen, according to the argument set forth by Brewington? I would like to know, also, if Humphreys was a member of this group of supervising shipwrights; I have never seen this question raised but there is probably evidence on the matter with which I am unacquainted.

I have made certain statements about Humphreys' relative prominence that require support. It is obvious that here I must again resort to personal opinion. It is my understanding that Humphreys built about thirty-five ships. For a designer this seems a small number, though for a builder this might be deemed a respectable quantity. This is perhaps the point that ought to be made: Humphreys was primarily a builder rather than a designer. Put it this way, men like Hackett, Fox, Doughty, Eckford, Bergh, and the Huttons made plans that were used by other builders, as a common activity, while this seems to have been a relatively rare experience for Humphreys. Samuel Humphreys was rather more of a designer than a builder; there is no list of the ships designed by him, that I know of, but from scattered references and the plans that survive I have esti-

mated that he turned out at least 53 designs. I do not suppose this is the full list however. Doughty's designs are less easily estimated but on surviving plans alone it could be shown that he designed 37 ships and small craft. The number designed by Hackett cannot be estimated on available evidence, I believe. To compare the past with the present is not wholly sound, yet I cannot resist pointing out that Thomas McManus turned out over 400 designs of yachts, fishermen, and coasters in a rather short professional life while Arthur D. Story, of Essex, Massachusetts, built over 300 vessels ranging from fishermen to steamers and large coasters.

I have the impression that Brewington thinks those builders and politicians who went ahead without waiting for the Philadelphia plans were at fault. If this impression is correct I cannot agree. It is evident in Brewington's account of the history of the design phase that Congress and the Marine Committee, and the local committeemen too, had bungled the program. An impossible and hopelessly optimistic completion date had been established; then a delay was created by waiting for standard designs, specifications, and contracts to be drawn up and sent out. In war, time is of the esssence. So we find that, with but one exception, the builders who were able to go ahead as soon as they had a contract, either through having the official plan immediately in hand (as at Philadelphia and Baltimore) or in using a plan of their own (as in part of New England) were the only ones to get their ships to sea.

I do not wish to appear to belittle Humphreys merely for the sake of an argument. I say that he was a very competent builder who had a good 'eye' for hull-form. That he had an excellent local reputation for intelligent building can not be doubted. He made a great effort to turn out superior vessels, as is apparent by the general tenor of the papers that survive. But I do not think now that he was the 'leading' ship designer either during the Revolution or afterwards. The part played by Humphreys in the design of the early American naval ships has possibly been much exaggerated and the work of Humphreys' associates correspondingly depreciated. This seems as unfair as taking credit from Humphreys for work which should be credited to him. I think it is possible that we may be able to avoid either extreme by more research and that a difference in opinion may bring forth evidence not yet available.

# *The Last Days of Coasting on Union River Bay*

*BY ERNEST STANLEY DODGE*

UNION River Bay is the next bay to the eastward of Penobscot serving as an outlet to a navigable river. Union River, to be sure, is but a stream compared to the broad Penobscot but, nevertheless, it made accessible the vast and rich timber region of northern Hancock County. Ellsworth is situated about four miles up the river at the head of tidewater and navigation. This was the ideal spot for a settlement depending on lumbering as its economic mainstay, for just above the town the river dropped, in a series of rapids and cascades, a hundred feet in two and a quarter miles, and provided ideal sites for sawmills. From 1763, when the town was settled by an argumentative group from Saco who, the story goes, provided us with the names for Contention Cove and Union River, the production of lumber steadily increased until the peak was reached ninety years later in 1853. In that year 35,000,000 board feet of sawed lumber and 250,000 box shooks came out of Ellsworth. It is said that this was second only to Bangor among all the lumber ports of the world. The flourishing shipbuilding and shipping industries which were stimulated by this tremendous lumbering activity continued, diminishing toward the last, throughout the nineteenth century.

My home was on the eastern shore of the bay about two miles below the river mouth. The locality is called Bayside and twenty-five years ago its principal industry was one of Whitcomb, Haynes and Whitney's sawmills on the other side of Lord's Cove from our house.

In the decade from 1920 to 1930 the twilight of a long and prosperous coasting period on Union River darkened until it foreshadowed the end which imperceptibly overtook the last schooner in the middle thirties. I knew this decade as a boy and write only of that time. The history of the shipping and shipbuilding on the bay and river is another story. The great coasting fleets, so numerous and so taken for granted up to 1914, were even then a memory. How, in my youthful heart, I longed to see the bay once more as the old people described it: fifteen or twenty schoon-

ers waiting off the mouth of the river for a tow to Ellsworth, and ten or a dozen being towed up at one time. The whole bay alive with sails coming and going, the busy wharves in every little cove, the whine of the saws, stacks of bricks rising higher in the brick yards, and the porgy houses emitting the ill smells associated with the manufacture of fish oil. I thought, 'Some day it will be like that again and I will go a-coasting,' but it never was and I never did.

One group of vessels was operated regularly in the bay in my time. At least one of the small fleet owned by Whitcomb, Haynes and Whitney Lumber Company could be seen nearly every day, except in winter when the bay was usually frozen over. Besides these a few other schooners came with coal for Ellsworth, or sailed with kiln wood for Rockland lime works, or cord wood for the homes of Bar Harbor or some other port. The lumber company was the last survivor of many similar ventures along the bay and river which provided employment for the local people. It was evidently profitable for the company to own its own schooners to carry the produce of its mills: long lumber, laths, shingles, barrel heads, and staves, to the markets in Boston, Philadelphia, New York, and other ports to the southward. In the twenties four of the Whitcomb, Haynes and Whitney vessels, the three-masted schooner *Henrietta A. Whitney,* and the two-masters *Lavolta, Storm Petrel,* and *Nellie Grant,* were frequently going and coming. Another large three-master, *Harry W. Haynes,* was seldom seen—I remember seeing her but twice. All of these schooners but one ended their long and useful careers in harness, some tragically. The other, I am sorry to say, has come upon sad days and reached an ignoble end.

The largest vessel regularly in the bay after 1920, and the only tern schooner, was *Henrietta A. Whitney*. She was originally a two-masted centerboard vessel of 171 tons, built at Calais, Maine, in 1871, called *E. & I. Oakley*. Her original measurements were: length 113 feet, breadth 28 feet, and depth 7.9 feet. In 1893 her home port was Cold Spring, New York.

Purchased by Whitcomb, Haynes, she was brought to Ellsworth in 1895 and rebuilt at the yard of Ira M. Grant. At this time she was changed from a centerboard to a keel vessel, her name changed, her tonnage increased to 217, and her dimensions, particularly her depth, increased. After these extensive alterations her length was 115.5 feet, breadth 28.7 feet, depth 9.1 feet.

As an example of *Whitney's* usefulness when business was brisk, in seven voyages to Rondout, New York, in 1899, she carried 4,700,000 staves

of the 20,000,000 shipped from Ellsworth that year, and brought back 15,400 barrels of cement to Boston. In my time she frequently loaded with long lumber or staves at the Bayside mill wharf and often brought coal to Ellsworth as a return cargo. Captain John W. [Johnny] Jordan, busy nowadays sailing dude coasters out of Camden, was her master for a great many years. On August 6, 1924, while lying at the wharf of a sardine factory in Eastport, she caught fire and was a total loss. Neither Captain Jordan nor any of his crew were injured.

The next of our local fleet to disappear was *Nellie Grant*. She was a two-master of 139 tons, 93.8 feet in length, 26.6 feet breadth, and 9.6 feet depth, built at Ellsworth by Abram Lord in 1873. She sailed in and out of the bay several times a season for many years, in the usual lumber and coal trade, under Captain Alexander Hutchins. On 28 September 1925, she sailed from Ellsworth for New York under Captain Newell Kane bound for Newark, New Jersey, with a cargo of staves. After leaving Boothbay Harbor she ran into heavy northwest wind. A very heavy gale blew for three days, and somewhere between Seguin Island and Cape Cod the old schooner apparently filled and washed to kindling wood. In early October the Portland boat from New York sighted wreckage and staves off Cape Cod and, no doubt, this was the cargo from *Grant*. She obviously foundered and her crew of four were lost sometime early in October.

Of old Captain Kane, as of some other coasting skippers, it was said that he had been coasting so long that when he came ashore he wouldn't urinate until he found a brook with a bridge over it, so he could relieve himself off the leeward side onto the water.

The schooner *Storm Petrel* was always my favorite coaster on the bay. She seemed to me to be a little more graceful than any of the others, although there is no denying *Lavolta* was a handsome vessel. She had unusually long topmasts for a Maine schooner which gave her more of the appearance of a Nova Scotiaman. The Bluenoses were noted for their extra tall topmasts and white paint. *Storm Petrel* was built at Ellsworth in 1870 by Ira M. Grant, a prolific builder of local schooners, and measured 174 tons, 100.9 feet long, 27.5 feet broad, and 10.8 feet deep. During the latter part of her long career with Whitcomb, Haynes, under Captain Albert E. Closson, many trips were made to New York with long lumber and staves. In 1921 she was rebuilt at Rockland, Maine.

By 1927 *Storm Petrel* and *Lavolta* were the last two coasters sailing out of Ellsworth. The next year *Storm Petrel* was sold to new owners and entered a business as prosperous as the lumber business was moribund. She became a rumrunner. Unfortunately nothing is known of this interesting

period in her career, but her eventual capture by government authorities resulted in her being sold at auction. Bought by some West Indies negroes, and manned by a crew of six plus a colored woman as cook, the end was near. Intending to take her down through Long Island Sound they ran her ashore on Cornfield Shoals where a hole was pounded in her side. She was picked up and towed toward New London but darkness came on and she sank at the end of the tow line in Block Island Channel off Watch Hill with all hands.

Whitcomb, Haynes and Whitney clung to *Lavolta* after all their other schooners were gone. She was the pride of their fleet, the fastest vessel out of Ellsworth, and reputed to be one of the fastest sailers on the Maine coast.

*Lavolta,* 168 tons, was built in 1870 at Ellsworth for a great-grand-uncle of mine, Captain John S. Whitmore. Her dimensions were: length 104 feet, breadth 27.4 feet, and depth 9 feet. Rebuilt in 1894 she had her deck 'riz' (as it was called), her tonnage increased to 194 and her depth to 10 feet. In all her long and useful life she had but few captains. Captain Whitmore sailed her to the southern ports and the West Indies for nearly twenty-four years. I have an account book of his, unfortunately partly used as a scrapbook, containing the records of his business transactions with his crew from November 1876 to October 1882. In that time there is only one indication of trouble with the crew.

St. Simons Island, Ga.

On the night of Jan. 27th 1880 after we had finished loading P. P. for Babadoes W. I. without any cause or complaint the above August Hansen (Seaman) deserted the Sch. *Lavolta* without liberty taking with him everything that belonged to him, and after waiting (5) five days or more and he still failing to return, other crew was shipped in his stead and we proceed on our voyage.

The same day seamen A. Miller and Hans Alsen also deserted and similar entries were made for each of them. After John Whitmore gave up coasting two or three other captains sailed *Lavolta* for short stretches. She was then taken by the late M. M. Whittaker who sailed her for about twenty years, followed by Captain Wellington C. Bellatty, her last master, who had her for over twenty more and took her on her last voyage. After Captain Whitmore her only owners were J. M. Higgins and Whitcomb, Haynes and Whitney.

*Lavolta* was always noted among coaster men for her speed. Talking one day, over ten years ago, with Captain Perry W. [Ped] Alley, a neighbor of ours, I mentioned that *Lavolta* was a fast sailer. Captain Alley had been skipper of *James Boyce,* a three-masted schooner, for many years, and

Schooner *Julia Frances* when launched
*Courtesy of Charles S. Morgan*

Schooner *Lavolta* in Union River Bay about 1928
*Courtesy of Charles S. Morgan*

Schooner *Bloomer*
*Courtesy of Charles S. Morgan*



Schooner *Storm Petrel* discharging coal at Friendship, Maine, 4 January 1922
*Courtesy of Albert Closson*

near the end of his seagoing days he sailed with Captain Bellatty as mate in *Lavolta* just to keep his hand in. I wrote down his reply at the time just as he told it. Not only does it confirm the sailing qualities of *Lavolta,* but it is the only account known to me of a fleet of coasters racing, although it was no doubt a common thing and there must have been keen competition among the crack vessels and captains.

Captain Alley said:

I hove into Chatham in the *James Boyce* one night with a load of stone. My mate was Bill Adams who had formerly sailed in the *Lavolta.* Bill had been saying he wished we would fall in with the *Lavolta* because she was a fast boat and he would like to race with her. I got up early the next morning and looked around and there was the *Lavolta* also loaded with stone. 'Ho Bill,' I said, 'Here's the *Lavolta.* I guess you get your wish.' All the vessels in the harbor got ready to pull out but had to wait for the tide to turn over the shoals. They all started with the *Lavolta* leading the pack. They got to the shoals and had to wait for the tide to turn; they thought they had waited long enough but hadn't. I started in the *Boyce* and tried to hold her back but came cracking right down into the middle of the fleet. We finally worked out over the shoals, the *Boyce* passing one vessel after another until she was up behind the *Lavolta.* The *Boyce* was carrying lower sails, fore staysail, jib, and flying jib, and spanker topsail. The Captain of the *Lavolta* saw us coming and started to break out his outer jib. I watched her through the glass and said, 'Well if she has good rigging she can stand it.' 'Oh she's got good rigging,' Adams said. The outer jib hadn't been set long when the whole fore topmast came cracking down over the side and the wreckage had to be got in and cleared away, which it was quite smartly. We passed the *Lavolta* at Pollock Rip Light Ship and at the end of the day she was hull down behind.

The next night we put into harbor [he did not say where] and there was the *Julie Francis,* a three sticker, supposed to be the second fastest vessel after the *Lavolta.* She was loaded with stone too. The *Lavolta* came in later in the night and eighteen more coasters going up through Long Island Sound to New York. 'Well,' says I, 'here's a good one for tomorrow, both the *Lavolta* and the *Julie Francis* here.' Next morning the fleet got under way. The *Boyce* waited until they were all started. They had to wait for the tide to turn to get through the narrows. Finally the *Boyce* started and passed one vessel after another until there were only three ahead of her—the *Lavolta,* and a big Nova Scotiaman loaded with lumber who was socking the sail to her something awful and had her lee rail under, and the *Julie Francis* in the lead. The tide on the north side of the narrows turned two hours before it did on the south side and the *Francis* hit it just right on the north side and went hooping through. It put her about seven miles ahead of the *Boyce.* The *Boyce* passed the *Lavolta* and then overtook the Nova Scotiaman who was crowding sail, and as soon as we passed her she began reefing. The *Francis* was still well in the lead. Long after dark up in the Sound I saw a little light to leeward and yelled through the speaking trumpet, 'Why don't you pull up your anchor and come to New York.' 'You go to hell' came back the answer faintly over the water. I was in New York and stowed away long before the *Francis.* I never saw a vessel that could beat the *James Boyce* on the wind but plenty of them could beat her running.

*Courtesy of Charles S. Morgan*

Schooner *Storm Petrel* discharging coal at Friendship, Maine, 4 January 1922
*Courtesy of Albert Closson*

In the spring of 1930 the Massachusetts Bay Tercentenary Incorporated purchased the schooner *Lavolta,* which was said, on no basis whatsoever incidentally, to have the approximate dimensions of the charter ship *Arbella* that brought John Winthrop and his party to Salem in 1630. After such changes in general appearance as would approximate, for purposes of pageantry, the appearance of a seventeenth-century ship, this new *Arbella* entered Salem Harbor 12 June 1930, three hundred years after the coming of Winthrop.

If, after the celebration, she had been scuttled or beached somewhere all would have ended well. But unfortunately three years after the tercentenary *Lavolta* became the property of the city of Salem. Reconditioned and rerigged in a sad, imaginary, and incorrect sort of way, she was placed on exhibition at the Salem Willows pier during July and August 1937. From the Willows she was taken to the Pioneer's Village at Forest River Park and horsed into a hole in the ground. Gradually disintegrating, the venerable old vessel has become the greatest unintentional historical hoax of the region as each summer wide-eyed midwesterners marvel that a ship could be so well preserved for three hundred years.

The most interesting incident during the *Arbella* masquerade occurred shortly after she was brought into the South River, near the Naumkeag Mills in Salem, to be refitted. The mill workers were out on strike at the time and Mr. Phalen, one of the mill officials, received the following anonymous letter.

May 17, 1933

Mr. Faling:
What for you have dose sheep at thee Mille.
You call heem Aribeller yes?
Mans tole me he is loded wit strikebraker to take our job.
You tink you fool smart frenchman hey?
If you no take heem away we sink goddam sheep, I tole you.
Peekot

Besides their schooner fleet, Whitcomb, Haynes always owned a tug which was one of the familiar sights on the Bay. The first I remember, although there were others before, was *Little Round Top,* a small steam tug. About 1923 she ran ashore at the mouth of Union River and went to pieces. After she ended her towing days her duties were taken up by *E. P. Dickson,* a gasoline-powered boat. The duties of these small work horses were various. They towed vessels from the mouth of the River to Ellsworth; logs boomed up at Ellsworth were towed down the river to the sawmill at Lord's Cove; and schooners, heavily laden at the mill wharf, were worked clear.

Other schooners occasionally came to load at the Bayside mill wharf but only one is distinct in my mind. She was the old *Bloomer,* a very ancient two-master, built in 1855. There was also an old schooner built for the Rockland and Rockport granite trade. These schooners were distinguished by having their mainmast stepped so far aft that the foresail was larger than the mainsail. The great distance between the masts allowed room for the derrick in loading and unloading granite. The granite schooners were not among the handsomest achievements of shipbuilders, although the old stone sloops had no little appeal to the eye.

Two incidents only come to mind regarding these other schooners at the mill wharf. In the middle of the cove there is a rock that is dangerous to heavily laden vessels from low to half tide. One skipper, unfamiliar with local waters, his vessel a two-masted schooner deep in the water with a high deck load of staves, decided to leave the wharf at about half tide and as the tide was ebbing. Sliding onto the rock the vessel stuck solidly and, as the tide went down, laid over on her side dumping the deck load into the water. I recall with what delight we watched this absurd spectacle and how all the boys tried to gather up as many bundles of staves as possible before some of the mill crew in their three dories and the schooner's crew in their yawl boat could salvage them. The skipper had proceeded against local advice and received very little sympathy.

The other incident might have ended tragically but most fortunately did not. The cove is sheltered on the westerly side by Lord's Point or the Mill Point, as it is sometimes called. This point makes well out into the bay and is largely exposed at low tide. Then the great rockweed-covered boulders are exposed and can be plainly seen. At high water, however, nothing breaks the surface, but the general contour of the shore indicates that a point is there. Well out beyond the point's end is a red buoy marking the channel. Vessels of any size coming into the cove always keep the buoy to starboard and are then sure of being well clear of the point. One day a strange two-masted schooner was seen coming up the bay, a brisk breeze sending her along at a pretty good clip. Many people were watching her as she came abreast the Mill Point when, to their utter astonishment, she came about and headed directly over the rocks. As the tide was high the large boulders could not be seen but the buoy was perfectly visible. Apparently the captain did not believe in buoys. This foolish act was all done so quickly and was so completely unexpected that there was no time for a warning; everyone simply watched openmouthed. That God watches over fools, drunks, and little babies was proved that day as the schooner slid between the rocks and came to in the cove as pret-

ty as you please. The skipper said afterwards that he did not realize that there was a point there until his small son, who was up in the bow, hollered to him that he could see rocks. Looking over the side he saw that boulders were all around him. Realizing that he could not possibly extricate himself he simply kept straight on and luckily missed them all. I was later told that a more frightened man you never saw.

Carrying lumber was the biggest business in the Bay, but my most intimate contacts were with another sort of trade. On our own side of the cove the old wharf, owned and used by several generations of the Whitmore family, was kept in repair by my father for use in shipping his cord wood. Nearly every winter, throughout most of the twenties, he, and sometimes others, hauled cord wood from the woods and piled it in the old brick yard near the wharf. After the good weather came, a smooth runway of planks was built from the wood piles to the wharf's end. The wood was usually sold to the Clark Coal Company of Bar Harbor and sometime during the summer their little schooner, *Mildred May,* arrived for loading. *Mildred May,* sailed by Captain Ralph Leland of Oak Point during the time I knew her, was a pretty vessel, painted gray with a white waist, rails, and house. She was rather narrow for a coaster and a good sailer. I can see her now, rounding the buoy and coming to in the cove. Captain Leland would wait until the tide was high and then bring her in to the wharf with the yawl boat.

It is probably well to explain here that a yawl boat has nothing whatever to do with the sailing rig of that name. Yawl boats were small power boats with gasoline engines, carried on the stern davits, and were universal equipment on all coasters. They were handy for many purposes but were principally used to work a vessel in to or away from a wharf. Standard procedure in working with a yawl boat consisted of putting the boat astern of the schooner and hoisting her bow out of the water with the davit tackles until it was snug against the schooner's transom. In this fashion a vessel could be nosed almost anywhere. I have also frequently seen this method used for providing power in a dead calm.

It is rather surprising to see how few hands were needed to handle a schooner. *Mildred May,* for example, was usually sailed by Captain Leland and one other man, rarely two, for crew. The lack of man power was made up for by a donkey engine up forward which did all the heavy hauling and hoisting. Two experienced men with a schooner, a yawl boat, and a donkey engine could work wonders.

Loading the vessel with cord wood was, to me, a great delight, but it was hard work for the men. As I look back on it now the method of load-

ing was unique, requiring a special kind of wheelbarrow. Several of these wheelbarrows were usually carried aboard the schooner and, as I have never seen or heard of them elsewhere, were probably developed for this particular trade. They were large with a wide-built frame and a small wheel only about a foot in diameter suitable for wheeling on a plank runway. At the front of the barrow were two posts solidly bolted to the frame and projecting out over the wheel at an angle of about 30° and looking for all the world like a pair of enormous horns. A very large load of wood could be taken as much of the load was over the wheel and beyond.

The runway usually sloped a little so that once the barrow was loaded and under way the man wheeling it simply had to hold on and keep it on the track. As he approached the schooner he shouted: 'In the hold,' warning the men below to watch out. At the hatch combing the wheel hit a block, the wheeler gave a mighty heave, and the wood went thundering into the vessel's hold. After the hold was full the deck load was piled high until there was not a cranny for another stick of wood and still leave room to work the ship. Stowing the wood away was done by two men, commonly the captain and his crew, while three men, hired by the person selling the wood, did the wheeling.

The few days that it took to load the schooner were always attended by great good humor. There were impromptu tests of strength to see who could wheel the biggest load. One man who almost always was one of the wheelers was a big fellow of tremendous physical strength, but he was deaf and none too bright and it was a pastime to bait him. Someone would quietly put on a little extra-sized load. The big man would watch this and then say in a deep voice: 'Showing off.' He would then put on an enormous load, so heavy it could hardly be held back, dump it and then laugh uproariously at his own strength. Jokes, good-natured banter, and occasional song made the work apparently lighter. I played around the vessel's deck, exploring her from end to end, and soaked all this up. Every time I ventured into the rigging someone always called me back. Not the least of this well-remembered atmosphere were the smells. Here the smell of the good clean wood, the rockweed, the clam flats, rigging, tar, and all those peculiar odors rising from the vessel's interior all blended into one exquisite whole. It was great stuff—I can still hear those shouts of 'In the hold!' and the cord wood thundering down.

The story would not be complete without saying something of Skip Mazrell and *J. Chester Wood,* an old schooner owned and sailed by Skip and his son Pete. She was the last vessel on the Bay engaged in that diverting and fascinating business known as bay coasting. Bay coasting con-

sisted of taking a cargo wherever it could be found, and carrying anything anywhere on the coast for anybody. *J. Chester Wood* was in deplorable condition, however, and she was seldom seen when her pumps were not being worked. Pete says she never did float by herself. The method of putting her up for the winter was simple and inexpensive. Skip would sail her over to Surry, drop anchor, and let her sink. There she could be seen all winter with her masts sticking out of the ice. Each year there was speculation as to whether this wasn't her last season. But when the ice went out of the Bay and the weather warmed up she was raised again and would appear and anchor off our shore with Pete and Skip working the pumps. She was literally the last leaf upon the tree and hung around well into the thirties. One summer day in the early thirties, when I was home on vacation, I saw her very nearly blown ashore by a strong northwesterly squall. The anchorage off the cove was always open as a bootjack to a nor'wester. The Mazrells were aboard at the time and managed to keep her off the rocky lee shore, albeit she dragged her anchors for some distance and I suspect the abating wind was all that saved her.

The only other coasters to come into the Bay in the late twenties and early thirties were two big three-masters, *Frank Brainard* and *Mattie J. Alles,* bringers of coal to Ellsworth. I suspect the last coal to arrive by water was brought by these two vessels. They were both good-looking schooners and I greatly admired them but was never fortunate enough to get aboard either one. *Frank Brainard* was probably the last schooner to run aground accidentally in Union River Bay. On 10 November 1932, when bound from Ellsworth to Boston with 175 cords of wood, she was driven ashore by heavy weather. There was no disaster, however, and she was soon pulled clear and continued on her way to Boston where she arrived 23 November.

Sad reminders of the times when coasting was a profitable and thriving occupation were the remains of several vessels along the shore. I suppose there isn't a half mile of the Maine coast that has not seen at least one vessel go to pieces. When a schooner could no longer be patched up to go one more season, she was simply run aground at high tide, and there she left her bones. At our own shore were the planks and timbers of *Mary Whitmore.* She was pretty well gone when I first remember her, but it was always fun, while wading and sailing boats, to walk on the planks lying in the mud. You could stick your big toe in the holes where the treenails had been—just why this was fun I don't know, but it seems to be a pleasant recollection. In far better condition, within my memory, was the old *Revenue,* beached at Closson's Cove. Her spars were gone but her hull was

intact and had not entirely outlived its usefulness as it was an ideal place for the boys to dive from at high tide. As I remember it the best place to jump off was anywhere along the port quarter. She has now disappeared; not a plank can be found.

Yachting never amounted to much in Union River Bay. I can barely remember Hannibal Hamlin's *Mystery,* a schooner yacht famous around the Bay for many years. There were only two yachts moored regularly near us. A Dr. Holmes had a small cruising yawl which he and his wife lived on every summer and with which they took short cruises, seldom of more than a week's duration. The other was a perfect little dream of a schooner named *Cygnet,* owned by a man named Swan and sailed by Captain Frank Pratt, a neighbor of ours. Swan ran a boys' camp and *Cygnet* was used to take the boys on cruises. Lovely was the snow-white *Cygnet* to look upon with her clipper bow, raking masts, and two topmasts, and Captain Pratt kept her immaculate. He loved her so completely that when she was destroyed in the disastrous Ellsworth fire of 1932, which burned the boat houses, he never recovered from it. It killed him. Swan replaced *Cygnet* with another, larger schooner, sailed by Captain Freeman Closson, but she always gave me the feeling of being an intruder. *Cygnet* should be at the mooring.

Captain Pratt, incidentally, built beautiful sailboats, some of them three or four feet long, good sailers and masterfully finished. I remember one trim little schooner he had completed which he wanted to race against an old sailboat of mine, a schooner of about the same size (three feet long) that had been given to me by an old man, Captain Samuel Alley. It had been brought home from Grand Manan by Captain Alley's father as a present to him when he was a little boy, and was reputed to be a model of a Grand Manan fisherman. Captain Pratt's schooner was a much faster sailer and left my old down-Easter far astern.

Now there is no activity on the Bay. No sailing craft is seen for days at a time. Occasionally a yacht or one of the dude schooners (cattle boats they call them locally) from Camden will put in an appearance. It might be fitting in closing to mention that the oldest schooner on the coast, *Alice C. Wentworth,* was rebuilt and fixed up for dude coasting a couple of years ago by Freeman Closson at his yard at Closson's Cove. Ironically the mainsail she now wears was formerly that of the famous yacht *Cleopatra's Barge II,* long a familiar sight in Marblehead waters and now rerigged in a modernistic manner and carrying the absurd name *Gee gee.* And so *Wentworth,* an old hooker of coasting days, and the *Barge,* a queen of the great days of yachting, are both ending their time in an anticlimax and have had a mainsail in common. Better they both had sunk.

# *Yachting in Chesapeake Bay, 1676-1783*

*BY ARTHUR PIERCE MIDDLETON*

IT is hard for anyone who knows the Chesapeake and is fond of the water to believe that our colonial ancestors in the tidewater of Virginia and Maryland neglected to go boating purely for pleasure, and yet specific references to yachting are not as common in the surviving records as one might suppose. The explanation may be that the daily activities of the colonists involved boating to such an extent that they sought diversion in other ways. Moreover, as Englishmen they were conservative and therefore apt to seek recreation in the New World after the fashion of their forebears in the Old: cockfighting, horse racing, hunting, and tippling. Yachting was scarcely known in England until the second half of the seventeenth century and then only among the court classes.

The earliest use of the term 'yacht' in Chesapeake Bay was in 1676 in connection with *Loyal Charles,* a vessel belonging to Lord Baltimore.[1] She does not appear to have been a yacht in the modern sense, for she carried soldiers as well as mariners, was 'compleatly manned Equipped and armed for warr,' cruised in the Bay against robbers, pirates, and spies, boarded vessels and examined their papers. Clearly the term as used in connection with *Loyal Charles* refers to her construction, mould, or rig, and not to her function.

The next use of the term was in connection with a small vessel that belonged to Major Richard Sewall of Maryland in 1689, called the 'yacht *Susanna.*' Little is known about her size, design, or rig, but she was large enough to have a master and three mariners in the crew. It seems clear that *Susanna* was a yacht in the modern sense, for she was described as 'a small yatch or pleasure boate.'[2]

The yacht *Susanna,* however, was an exception. There were so many

1 *Maryland Archives,* VII, 137; XVII, 216-217.

2 *Calendar of State Papers, Colonial Series, America and West Indies,* 1689-1692, no. 784, p. 223; *Maryland Archives,* VIII, 163-164, 174, 176, 251-262. 'Majr Sewell had not been on any Tradeing designe nor was it a boate for trade nor profitt but pleasure a vessell of the Country only made use of upon acct of visitts to his friends.' See also, ibid., VIII, 258.

kinds of boats and small vessels in the Chesapeake that there was no need to build special types to be used solely for pleasure. When a group of ladies and gentlemen decided to go on a 'sailing party,' they generally used a sloop or schooner belonging to one of their number. In this way ordinary trading or fishing vessels were temporarily converted into pleasure boats.

An interesting example of this kind that occurred shortly after the Revolution is charmingly described in a letter of William Craik of Strawberry Hill to Walter Stone of Port Tobacco, then on a visit to Philadelphia. Craik while visiting the Ridouts in Annapolis was included in 'a Sailing party in Mr Fell's Boat,' consisting of 'Madam Ridout,' her daughter, Miss Blackburn, and Messrs. Weems, Fell, Moore, Washington, Harrison, and Craik. Sailing down the Bay and up the Potomac, they attended the races at Marlborough (a river town, now extinct, that was situated near the mouth of Potomac Creek) and ended up at Strawberry Hill. They must have had a gay time, because Mr. Harrison, according to Craik, 'appears to have suffered much by Miss Ridout's Eyes.' Not even the illness of Mr. Washington, who broke out with measles, dampened the gaiety of the yachting party.[3]

There is some evidence that certain vessels were more suitable than others for yachting purposes. The *Maryland Gazette* in 1746 carried an advertisement of a new schooner of thirty-six tons, described as being built for the West India or coasting trade, 'railed and handsomely finished, with a Scroll Head, fit for a Gentleman's Use.'[4] It is clear that by this time gentlemen had use for small vessels as yachts and that such vessels were expected to be handsomely finished and decorated. It does not follow, however, that such vessels were used solely for pleasure. They were used variously for yachting, for transporting commodities from plantation to river town or from one river to another, for visiting and travelling, and for trade within the Bay, to neighboring colonies, or to the West Indies.

A good example is the schooner *Harriot* belonging to Robert Carter of Nomini Hall. In December, 1773, Carter invited Captain Walker, Colonel Richard Lee, and Mr. Lancelot Lee to accompany him aboard *Harriot* to the Eastern Shore of Maryland for oysters. As the gentlemen went for pleasure, sailors were taken along 'to work the vessel.'[5] The following February, Carter ordered the crew 'to rigg, and fit his Schooner . . .

[3] [William Craik] to Walter Stone, 12 May 1783, in Stone Papers, p. 93, Library of Congress.

[4] *Maryland Gazette*, September 30, 1746.

[5] Hunter D. Farish, ed., *The Journal and Letters of Philip Vickers Fithian, 1773-1774* (Williamsburg, 1943), p. 38. The *Harriot* had a 38-foot keel, 14-foot beam, 6-foot depth of hold, and was valued at £140 in 1777. Louis Morton, *Robert Carter of Nomini Hall* (Williamsburg, 1945), p. 199. William Lawrence, her master, was a mulatto.

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1 *Maryland Archives,* VII, 137; XVII, 216-217.

2 *Calendar of State Papers, Colonial Series, America and West Indies,* 1689-1692, no. 784, p. 223; *Maryland Archives,* VIII, 163-164, 174, 176, 251-262. 'Majr Sewell had not been on any Tradeing designe nor was it a boate for trade nor profitt but pleasure a vessell of the Country only made use of upon acct of visitts to his friends.' See also, ibid., VIII, 258.

kinds of boats and small vessels in the Chesapeake that there was no need to build special types to be used solely for pleasure. When a group of ladies and gentlemen decided to go on a 'sailing party,' they generally used a sloop or schooner belonging to one of their number. In this way ordinary trading or fishing vessels were temporarily converted into pleasure boats.

An interesting example of this kind that occurred shortly after the Revolution is charmingly described in a letter of William Craik of Strawberry Hill to Walter Stone of Port Tobacco, then on a visit to Philadelphia. Craik while visiting the Ridouts in Annapolis was included in 'a Sailing party in Mr Fell's Boat,' consisting of 'Madam Ridout,' her daughter, Miss Blackburn, and Messrs. Weems, Fell, Moore, Washington, Harrison, and Craik. Sailing down the Bay and up the Potomac, they attended the races at Marlborough (a river town, now extinct, that was situated near the mouth of Potomac Creek) and ended up at Strawberry Hill. They must have had a gay time, because Mr. Harrison, according to Craik, 'appears to have suffered much by Miss Ridout's Eyes.' Not even the illness of Mr. Washington, who broke out with measles, dampened the gaiety of the yachting party.[3]

There is some evidence that certain vessels were more suitable than others for yachting purposes. The *Maryland Gazette* in 1746 carried an advertisement of a new schooner of thirty-six tons, described as being built for the West India or coasting trade, 'railed and handsomely finished, with a Scroll Head, fit for a Gentleman's Use.'[4] It is clear that by this time gentlemen had use for small vessels as yachts and that such vessels were expected to be handsomely finished and decorated. It does not follow, however, that such vessels were used solely for pleasure. They were used variously for yachting, for transporting commodities from plantation to river town or from one river to another, for visiting and travelling, and for trade within the Bay, to neighboring colonies, or to the West Indies.

A good example is the schooner *Harriot* belonging to Robert Carter of Nomini Hall. In December, 1773, Carter invited Captain Walker, Colonel Richard Lee, and Mr. Lancelot Lee to accompany him aboard *Harriot* to the Eastern Shore of Maryland for oysters. As the gentlemen went for pleasure, sailors were taken along 'to work the vessel.'[5] The following February, Carter ordered the crew 'to rigg, and fit his Schooner . . .

[3] [William Craik] to Walter Stone, 12 May 1783, in Stone Papers, p. 93, Library of Congress.

[4] *Maryland Gazette*, September 30, 1746.

[5] Hunter D. Farish, ed., *The Journal and Letters of Philip Vickers Fithian, 1773-1774* (Williamsburg, 1943), p. 38. The *Harriot* had a 38-foot keel, 14-foot beam, 6-foot depth of hold, and was valued at £140 in 1777. Louis Morton, *Robert Carter of Nomini Hall* (Williamsburg, 1945), p. 199. William Lawrence, her master, was a mulatto.

for Business.'[6] In March *Harriot* was used to assist in unloading a coasting vessel that had grounded in the Potomac with a cargo of wheat from Alexandria bound to Philadelphia.[7] In July the tutor in Carter's family, Philip Fithian, described *Harriot* as 'a neat vessel,' with a capacity of fourteen hundred bushels.[8] In August *Harriot* carried a cargo of five tons of iron bars, sixty barrels of bread, and ten barrels of flour to Norfolk.[9] Carter's schooner, used both for pleasure and business, is probably typical of the practice of colonial yachtsmen on the Chesapeake.

Towards the end of the colonial period there appeared a full-fledged yacht in Virginia waters, *Lady Gower,* belonging to Governor the Earl of Dunmore. Unfortunately, however, we know nothing about her except that she arrived at Burwell's Ferry on James River in September, 1771, 'in four Days from New-York . . . with Part of his Excellency's Retinue, Baggage, etc.'[10] Yachting by this time had become sufficiently common to obtain legislative recognition. The Virginia Act of 1772 for cutting a navigable canal from Archer's Hope Creek to Queen's Creek, through or near Williamsburg, exempted pleasure boats from the ordinary toll for passing through the canal.[11]

Of pleasure boating on a smaller scale there are more frequent instances. Fithian's journal contains a number of them. Mr. Atwell of Machodoc Creek owned a boat 'built for the purpose of carrying the young Ladies and others of the Family to Nominy Church.' It was 'a light neat *Battoe* elegantly painted' and 'rowed with four Oars.'[12] Robert Carter also had a boat for the purpose. One Sunday, while on his way to church in Carter's boat, Fithian noticed that Nomini Bay was 'alive with Boats,' some going to church, some fishing, and some 'Sporting.'[13] In the fall of 1774, a group of girls at Nomini Hall 'entered a Boat, and for exercise and amusement were rowed down the River.'[14] On another occasion, Fithian, while visiting Mr. Campbell, borrowed his barge before dinner and with several other guests 'diverted ourselves in the River.' The barge he described as 'an overgrown Canoe,' and the boating as 'Sport.'[15]

[6] Farish, *Journal of Fithian,* pp. 89-90.

[7] Ibid., p. 102.

[8] Ibid., p. 196.

[9] Carter Papers, II, 52, Virginia Historical Society.

[10] *Virginia Gazette* (Purdie and Dixon), 12 September 1771.

[11] William Waller Hening, ed., *The Statutes-at-Large, Being a Collection of All the Laws of Virginia* (Richmond, 1819-1823), VIII, 560.

[12] Farish, *Journal of Fithian,* p. 190.

[13] Ibid., p. 252.

[14] Ibid., p. 248.

[15] Ibid., p. 101.

Although there was nothing in colonial days that can properly be described as a yacht race, there were occasional boat races. George Washington attended one on 7 May 1774, in company with Mr. and Mrs. John Parke Custis, Miss Calvert, and Mr. Matthew Tilghman, at Johnson's Ferry on Potomac River.[16]

Late in July and early in August 1774, boat races were held in the Rappahannock off Hobbs' Hole, now Tappahannock. Captain Dobby of the ship *Beaufort* invited sixty gentlemen and forty-five ladies aboard his ship for the occasion. An awning was stretched from the stern over the quarterdeck to the mizzen-mast to protect the spectators from the sun. The jovial and sociable skipper entertained the whole company at dinner. Although they were 'not throng'd at all,' the large number of guests made it necessary for them to dine 'all at twice,' instead of all at once.

The races are best described by Fithian:[17]

> The Boats were to Start, to use the Language of Jockeys, immediately after Dinner; a Boat was anchored down the River at a Mile Distance—Captain *Dobby* and Captain *Benson* steer'd the Boats in the Race—Captain *Benson* had 5 Oarsmen; Captain *Dobby* had 6—It was *Ebb-Tide*—the Betts were small—& chiefly given to the Negroes who rowed—Captain Benson won the first Race—Captain Purchace offered to bett ten Dollars that with the same Boat & same Hands, only having Liberty to put a small Weight in the Stern, he would beat Captain *Benson*—He was taken, & came out best only half the Boat's Length.

On gala occasions such as regattas and on occasions of official rejoicing, vessels habitually dressed ship. In 1688 the Maryland Council in proclaiming a holiday in honor of the birth of the Prince of Wales ordered 'that all shipps and vesselles in the Rivers harbours and Creekes of this Province . . . spread their flaggs and discharge their guns in token of joy.'[18] On St. Andrew's Day, 1761, the election of the mayor, aldermen, and council of the city of Alexandria was attended by great pomp and ceremony involving a grand procession. The 'shipping' in the harbor participated by firing guns the whole afternoon and by displaying 'their flags and streamers.'[19]

Notwithstanding the paucity of evidence of specially constructed yachts, the Chesapeake during the eighteenth century developed a type

[16] John C. Fitzpatrick, ed., *George Washington, Colonial Traveller, 1732-1775* (Indianapolis, 1927), p. 352.

[17] Farish, *Journal of Fithian*, pp. 201-203.

[18] *Maryland Archives*, VIII, 44-45, 58-59. The next day, 6 October 1688, the Council ordered Captain Samuel Philips, 'His Lordships Admirall of Maryland,' on board the ship *Baltimore* in South River, to 'spread your Colours and discharge your Cannon' and to command all other ships 'within your precinct' to do likewise.

[19] *William and Mary Quarterly*, 1st series, IV (1895-1896), 17-18.

of vessel that later exerted a profound effect upon yacht design. Sometime before 1745—the exact date is unknown—the pilot boat evolved in the Bay. Probably influenced by the Bermuda sloop, the pilot boat soon acquired schooner rig and came to be characterized by sharp lines, low freeboard, deep drag of keel aft, hollow quarters, simplicity of hull and rig; in fact, by all those things that were characteristic of Chesapeake Bay clipper-schooners (later known to fame as 'Baltimore Clippers').

The pilot boat was a trim craft, distinguished for speed and seaworthiness. Though not well adapted to trade, having small cargo space, it proved ideal for yachting. Its lines were adopted for that purpose in the succeeding century when that sport became fashionable among men of sufficient means to afford the luxury of owning and operating vessels solely for pleasure. The Virginia or Chesapeake variety was the forerunner of other American pilot boats, its development culminating earlier than that of northern pilot boats.[20]

Almost all schooner yachts until about 1890 were on the lines of pilot boats.[21] The most conspicuous triumph of the type was the celebrated victory of the yacht *America* in 1851. Her unexpected success racing against the best contemporary English yachts by profoundly shocking the English brought about considerable changes in yacht design there as well as here.[22]

20 Howard I. Chapelle, *American Sailing Craft* (New York, 1936), p. 188.

21 Ibid., p. 215.

22 E. Keble Chatterton, *Fore and Aft; the Story of the Fore and Aft Rig from the Earliest Times to the Present Day* (London, 1912), p. 174. 'By the close of the eighteenth century the great national revival reached yacht building in Great Britain. There began to be introduced greater originality with better designs, giving the yacht an increase of speed. But conservatism impeded development in yachts until the *America* of 1851 proved to be a bombshell and brought the final cleavage between old and new ideas.'

# *An Elm Bark Canoe in the Peabody Museum of Salem*

*BY WILLIAM N. FENTON and ERNEST STANLEY DODGE*

## I

AMONG the important early ethnological specimens in the Peabody Museum of Salem are a number of rarities from the Indians of North America which were brought home to Salem by members of the East India Marine Society and their friends. Since the Society is an old one, having been founded in 1799, there was still opportunity to collect specimens of the arts and crafts of the Indians of New England and of the Great Lakes, although the natives of these areas were of somewhat peripheral interest to members of the Society. But, fortunately, samples of Indian art work in quills, buckskin, and birch bark, besides various weapons, and models of canoes came to Salem and found their way eventually to East India Marine Hall.

During a visit by Fenton to Salem in February of 1948, our attention was drawn to a rather generous model of an Iroquois elm bark canoe [East India Marine Society Catalogue '3390 Model of a Canoe from Lake Huron';[1] Peabody Museum ethnological catalogue E 928], which in general appearance suggested the type specimen which was described and illustrated in 1851, and later, by L. H. Morgan.[2] While Morgan's specimen was presumably collected about 1848 in western New York, either from the Seneca of Tonawanda Reservation or from the Six Nations on Grand River, Ontario, and perished most probably in the fire that destroyed the New York State Capitol and collections in 1911,[3] the Salem

[1] *The East-India Marine Society of Salem* (Salem, 1831), p. 147.

[2] L. H. Morgan, *The League of the Ho-dé-no-sau-nee or Iroquois* (H. M. Lloyd, ed., New York, 1901), II, Plate II, and 25-26. Morgan first published this canoe in the first edition of *The League* (Rochester, 1851) and in the *Fifth Annual Report of the University, on the Condition of the State Cabinet of Natural History, and the Historical and Antiquarian Collections Annexed Thereto* (Albany, 1852), Plate 15, 105-107. A similar model, made by a St. Francis Abenaki and collected by E. T. Adney, has gunwales, ribs, and sheathing of cedar like Algonquian birch barks; see F. G. Speck, 'The Iroquois, a Study in Cultural Evolution,' *Cranbrook Institute of Science, Bulletin* 23 (1945), p. 17. Fenton's travel was supported by the American Philosophical Society (Grant 22 R) and the Smithsonian Institution. Published by permission of the Secretary, Smithsonian Institution.

[3] Personal correspondence; N. C. Clarke to W. N. Fenton, 25 August 1948.

specimen is earlier, having been collected before 1825, and, therefore, is entitled to consideration as the new type specimen. It is first reported in 1825 in the *Record of Donations* by the Curator at the Quarterly Meeting of the East India Marine Society for the period 2 September-2 November, that year, as collected and donated by Major (later Colonel) Cutler who, in addition to a number of war clubs, '. . . also gave three models of Indian canoes of different nations.'[4] We presume that this is the same Major Enos Cutler who, according to the *Salem Vital Records,* married Harriet Elkins 1 July 1819.[5] Since the elm bark canoe is catalogued as from 'Lake Huron' and since the other donations from Major Cutler are from the Chippewa and their neighbors, it is likely that Major Cutler was stationed at Detroit or one of its outposts.[6] During the first quarter of the nineteenth century, the Huron had a settlement on the east side of Detroit River, and a century later some Hurons survived at Anderdon township, Ontario; but the greater body of the Hurons of Detroit had meanwhile joined the Senecas of Sandusky with whom they had migrated to Indian Territory, where a few as 'Wyandots' live in northeastern Oklahoma. Although the elm bark canoe model may have been made by Senecas of Sandusky, or in some one of the outlying Seneca settlements in Ohio, where the outposts were of common culture with the Senecas of western New York, we have pursued the Huron angle to account for the label 'Lake Huron' on the assumption that the Detroit Huron resorted to elm bark when living south of the range of the canoe birch and because birch bark canoes among the Huron were mainly of Algonquian manufacture.

Regardless of its provenience, a study of the specimen itself, leading to the following description, yields a number of points about its manufacture which we are able to confirm by reference to earlier historical de-

[4] East India Marine Society manuscripts in the Peabody Museum of Salem.

[5] *Vital Records of Salem Massachusetts to the End of the Year 1849* (Salem, 1934), III–Marriages, 270.

[6] Enos Cutler became First Lieutenant in the Seventh Infantry, 3 May 1808; Major in Second Infantry, 10 February 1818; Lieutenant Colonel in Third Infantry, 28 April 1826; died 14 July 1860 (Francis B. Heitman, *Historical Register and Dictionary of the U. S. Army* [Washington, 1903] I, 349). His term as Major is what interests us, since the canoe was donated in 1825. Hugh Brady was Colonel and commanding officer of Second Infantry in 1825, with headquarters at Madison Barracks, Sacketts Harbor, New York. Among the posts listed is Cantonment Brady, Sault Ste. Marie, Major E. Cutler, Commanding Officer. (W. A. Gordon, *A Compilation of Registers of the Army of the U. S. From 1815–1827* [Washington, 1837], p. 279). Cutler arrived at Sault Ste. Marie Agency, Fort Brady, in early autumn of 1823, replacing Lieutenant Colonel Laurence who in turn had succeeded Brady. H. R. Schoolcraft was Indian Agent and was having continual difficulties with the military authorities. (National Archives: Indian Department, Letters Received 1822–1826 H. R. Schoolcraft at Sault Ste. Marie Agency.) The Records of the Adjutant General's Office (National Archives: War Records Division, Army Section) contain a number of letters by Cutler to his commandant and to the Adjutant General, written at Cantonment Brady 14 August 1824 to 22 July 1825. Cutler was in Salem on 11 September 1825 and undoubtedly gave the model in question to the museum during this visit.

scriptions, by comparison with similar elm bark vessels from the Iroquois, and by field work among the few old Iroquois people who still know something of the elm bark industry of their ancestors, although none of them ever saw or handled a full scale elm bark boat. Putting all these shreds of evidence together we can approximate with reasonable accuracy how such canoes were made.

The model canoe is made of a single piece of elm bark (Plate 23), of which the smooth inner-surface has been exposed and the rough outer bark surface has been smoothed off before being bent in against its natural curvature to form the inside of the vessel. (See illustrations of forward and aft views, Plate 24.) As in making a birch bark canoe, elevating the bow and stern requires folding or cutting the bark at the quarters; in the model the elm bark is folded at the forward quarter (14¼ inches from the bow) and at the aft quarter (15 inches from stern), the bark being folded on itself toward the stern so as not to obstruct the flow or cause the vessel to drag. In making the folds, the rough outer bark is scored and the surface is scraped away so that the rind can be folded (Fig. 1, A), and the folds are lashed in place (in this model with cord), the line passing through a center hole which goes through the entire fold of three layers, and the lashing extends over the top edge of the bark and passes through two pairs of holes placed vertically on either side (Fig. 1, B and C). (Probably in full scale vessels the bast of elm, basswood, or inner hickory bark served as lashing.)

The stem and stern posts are single staves of split willow (although hickory or oak probably served in larger vessels), cut out and folded at the center; they project below the bow and stern and are lashed in three places, at least three times through two cuts, with basswood bast which is tied with square knots, although 'grannies' appear elsewhere. The stem post is 5 inches long and projects $\frac{9}{16}$ of an inch below the bark; likewise the stern post measures 5 inches and projects $\frac{11}{16}$ of an inch below the bark.

*Dimensions.*—Overall length, 4 feet; beam at center thwart, 9½ inches; inside depth at center thwart, 4½ inches; stem and stern posts, 5 inches.

The gunwales consist of paired whole twigs (which are saplings or poles in full scale); they are tapered at the ends; and the whole pole inner gunwale is lashed to a twig or sapling which has been split through its entire length to form the outer gunwale. Unlike models of birch bark canoes, the lashings are not continuous but they number 13 and are spaced from three to four inches apart, and pass around the inner and outer gunwales and through a pair of holes in the bark sides three times and are tied on

top with square or granny knots, of the 26 the former predominating in the ratio of 18 to 8 (Fig. 3, F). To keep the ends from unfolding, bow and stern are lashed together, gunwale to gunwale, at a point 2½ inches from the peaks; and both sets of lashings are tied with grannies.

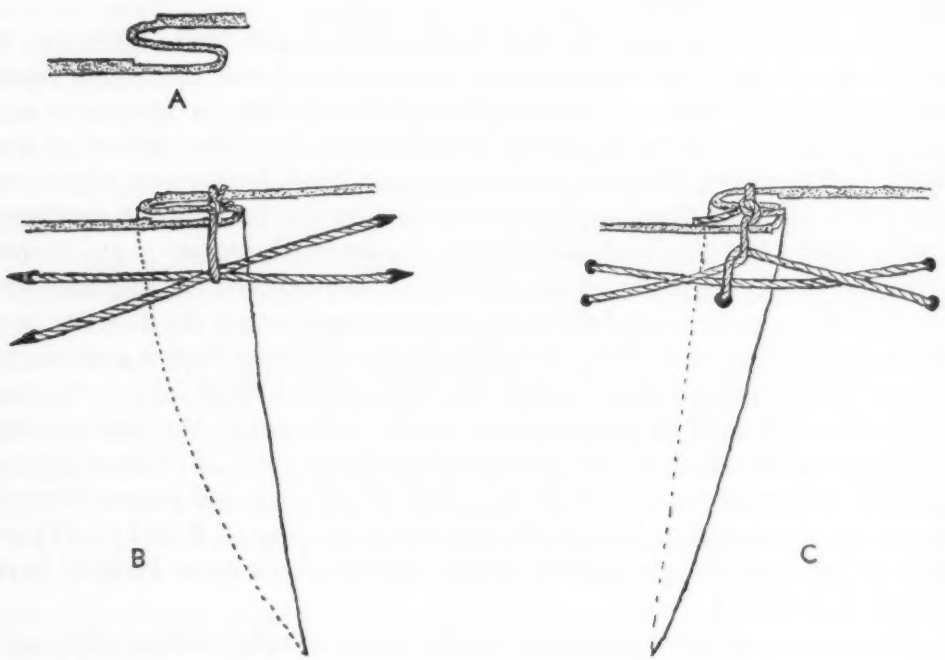
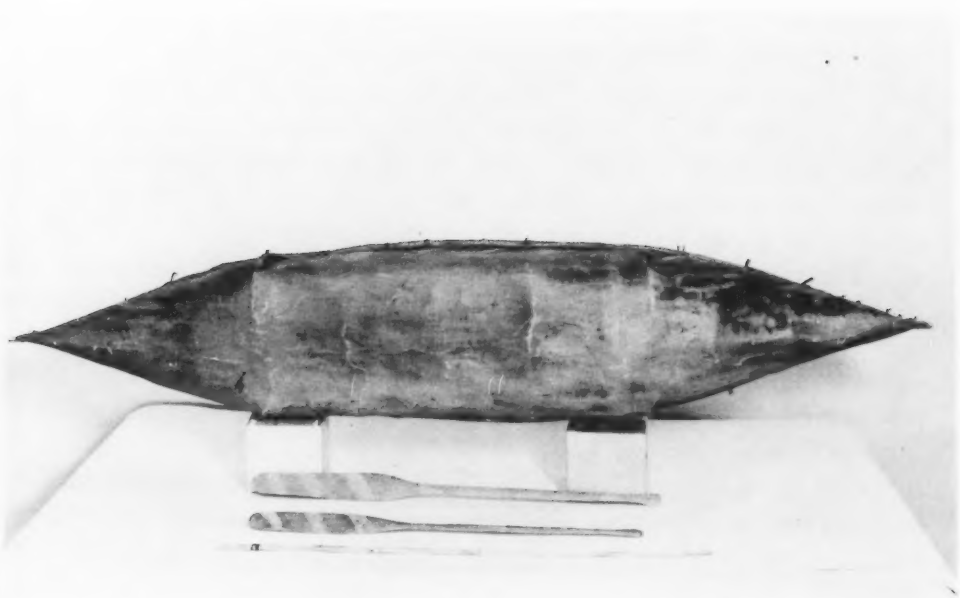



Fig. 1
Detail of binding on folds
A. Cross section showing how bark is cut to fold.
B. Binding as it appears on outside.
C. Binding as it appears on inside.

The three thwarts, spaced at the center and each quarter, are of split saplings, which have been tapered to the ends and are passed around the inner gunwales from above to below, bark side up, and are lashed, five to six times, to themselves with the same bast as the gunwales and are tied with square knots on the top side (Fig. 2). Although in general the thwarts are spaced amidships and at the forward and aft quarters, they are not quite symmetrically placed since the bow quarter thwart is 16 inches from the bow, the stern quarter thwart is 14 inches from the stern, and the midship thwart is actually 3 inches abaft of midships. Such evidence of sloppy boat building may only be important if it caught the attention of

Side view



Bottom view

Elm bark canoe model [E 928] in the Peabody Museum of Salem

*Dimensions: length, 4′; beam at center thwart, 9½″; inside depth at center thwart, 4½″; stem and stern posts, 5″.*

View of model looking from the stern towards the bow



View of model from the bow towards the stern, showing the arrangement of the reflector and torch at the bow

Elm bark canoe model IE 9081 in the Peabody Museum of Salem

earlier observers who compare hasty design of Iroquois elm bark boats with the rather nice construction of Algonquian birch barks.

The ribs, as in birch bark canoes, were inserted afterward; they are split saplings (probably hickory) split on the inner side with the greatest thinness at the center until the ends return to the normal diameter of the sapling which is bevelled sharply at the ends to hold the ribs in place against the inner gunwales. Actually the ribs appear to have been shaped by first bevelling the ends of the saplings and then making a cut from each end toward the center and splitting out the intervening wood, then

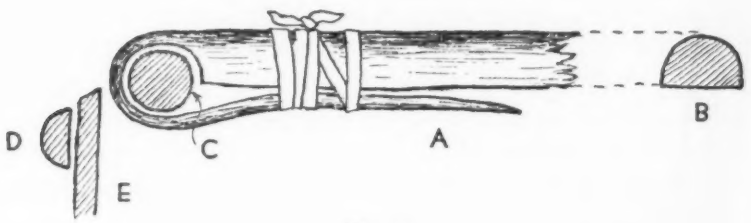



Fig. 2

Detail of thwart attachment

A. Thwart.
B. Cross section of thwart.
C. Inner gunwale.
D. Outer gunwale.
E. Elm bark.

gradually shaving to the center of the rib which is thinnest (Fig. 3, C and D). The process resembles the technique of making handles for splint baskets. There are but nine ribs, the first of which is placed 6½ inches from the stem, after which they are spaced from 3½ inches to 4¾ inches, until the last, which is likewise 6½ inches from the stern. Elm bark, which when dry becomes as tough as a board, evidently required fewer ribs than the birch bark canoe in which ribs are closely spaced, and in this model there is no planking, nor are there floor boards.

Some indication of the purpose for which this type of craft was intended may be surmised from the fact that the model maker mounted a torch and a reflector for night spearing in a bracket in the bow. (Plate 24, left.) The bracket is fashioned from a sapling 6½ inches long, which is split half way of its length; the other end is pointed and jammed into the bow, and the split ends are pulled apart and lashed to either gunwale with cord. Another pointed post, some 9⅞ inches long which holds the reflector and torch, is mounted upright as a mast, point downward, and tied into the crotch of the bracket. The reflector is lashed to the post above

Elm bark canoe model [illegible] in the Peabody Museum of Salem

torch at the bow

and below, by means of cord passing through two sets of holes; it is a rectangular piece of elm bark, which has been scarfed and bent at a right angle. The upright part of the reflector stands 4 inches, and tapers im-

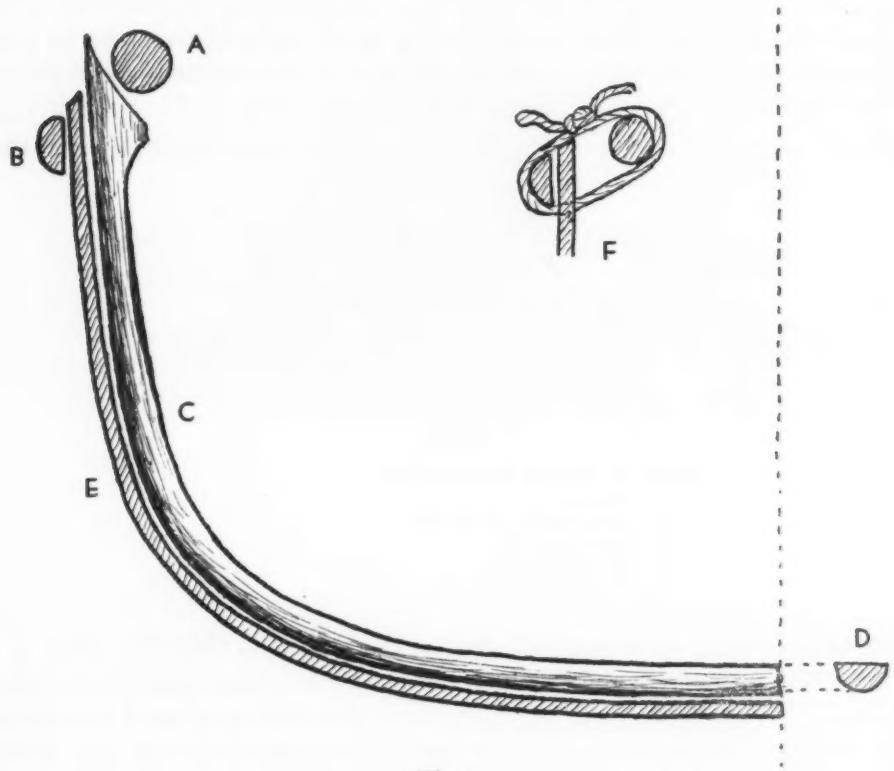



Fig. 3
Cross section amidships
A. Inner gunwale.
B. Outer gunwale.
C. Rib.
D. Cross section of rib.
E. Elm bark.
F. Cross section of rail between ribs showing rail lashing and the distance of the inner gunwale from the bark due to the space taken up by the ends of the ribs.

perceptibly from 2 1/4 inches at the scarf to 2 1/8 inches at the top; and the pan is 3 1/4 inches long, tapering from 2 1/4 inches at the scarf to 1 1/4 inches at the rim. To prevent the reflector and pan from curling, battens were lashed on the face of the reflector and beneath the pan. The torch is a bundle of splintered fat pine, wound at the bottom, and it stands upright

in a square hole placed ½ inch from the scarf in the pan. (The elm bark reflector was unquestionably green and wet during much of its use, and the pan held sand and gravel which could be dampened.)

Characteristic of other Iroquois war and hunting gear and modern ceremonial equipment, the vessel is decorated with diagonal stripes of (red) paint which come down to the water line an inch broad and some 2½ inches long. The stripes point toward either end (on the starboard side) but on the other (port) side they are pointed forward. Bow and stern bear a broad band on each side next to the stem posts.

As further indication of its mission, the vessel is fitted out with a pair of paddles and a fish spear, or lyster. The paddles are of pine and resemble the paddles used by the Iroquois in the Stirring Ashes ceremony at Midwinter, having tapered blades and straight handle without pommel at the butt. These miniature paddles suggest Chippewa influence in the slight development toward a pommel. Each paddle is decorated with three diagonal bands of red paint on both faces, and the longer of the two also has three bands of paint on the handle. The stern paddle is tapered like a modern racing paddle, but the shorter, bow paddle has a straight blade. The lyster shaft is also decorated with three bands of paint as are its points. Considering that paddles of this type ordinarily measure about five feet for bow paddles and not over six feet for the stern, and that modern Iroquois fish spears are between ten and twelve feet long, it is evident that the proportions between the gear and the canoe are quite out of balance, a disproportion which is characteristic of native models generally. One paddle measures 19⅜ inches long; the other 21 inches; and the lyster measures 23⅝ inches.

The following general remark applies to the shape of the craft. The vessel is flat-bottomed amidships with hard bilges. The bow rises 3 inches from the scarf, and the stern 3⅞ inches, the disproportion probably being accidental and characteristic.

From the evidence at hand, we may reconstruct the building of an elm bark canoe along the following lines of necessary presupposition. First, canoe building took place at a season when the whole bark of the elm could be readily removed, sometime after the sap rises, most probably in May or June. This is the season when the Iroquois take elm bark for making vessels of analagous construction, such as dishes and utensils; and no special tools are required other than an axe, a spud which is usually made of hickory, and a knife. Stone tools would suffice as well. Once removed, the bark was weighted bark-side up and scraped. It was next

necessary to scarf and crease the places that would be folded, and excess bark was removed to enable folding. Meanwhile, someone had to prepare a quantity of bast for stitching and lashing. The inner surface of the elm afforded some bast for cord making, but the Iroquois preferred basswood and the inner rind of hickory which is especially tough, works readily while green, and is their favorite binder for basket rims, bark vessels, and similar purposes. Fourth, they cut hickory, oak, or soft maple saplings to split and fashion gunwales, thwarts, stems, and ribs. Actual construction began with folding and binding bow and stern, lashing the stem pieces in place, and elevating the bow and stern. This done they could fold and bind the creases. Gunwales were installed before either thwarts or ribs. Once the gunwales were lashed in place, and tied with a random series of square knots and grannies, the three thwarts were installed: at the center to keep the vessel from spreading, and at the fore and aft quarters. It remained only to snap in a few ribs, of which many were not required because elm bark is thick and tough, and for the same reason planking or floor boards was optional. Withal there is evidence of hasty but certain conception with rapid execution and sloppy construction. It is likely that such vessels were built for use during a single campaign and at best for a season or two. If the Iroquois were not good shipwrights, neither were they a riverine people, but they were landsmen who took fearlessly to rivers for some fell purpose such as war, or to fish near their villages. As contrasted with the well-designed and masterfully made birch bark craft of their northern Algonquian neighbors, the elm bark canoes of the Iroquois, with flat bottoms amidships and hard bilges, were adapted neither especially for use on rivers with white water or on lakes. They must have been extremely unseaworthy. Possibly this is why the present model is decorated with red paint, with which they striped all their war gear, to impart to the vessel some of the magic of good luck and hope for a successful enterprise. The red paint may also reflect Iroquois boasting in warfare and some of their disdain for their neighbors.

For historical perspective and to verify these points, let us turn to the parallel data of ethnology and to earlier historical accounts of Iroquois canoe building.

## II

The elm bark canoe of the Iroquois is previously known from L. H. Morgan's illustration and description.[7] Since Morgan conducted the first serious ethnological investigations among the Seneca and Onondaga in

[7] Morgan, op. cit.

the 1840's,[8] at a time when available Iroquois informants were only a generation removed from the living practice of their material culture and much of it yet survived, his remarks have high priority. He says that the canoe which he illustrates was made of a single piece of red-elm bark and measured 25 feet and he estimated it at two tons burthen. Is he quoting Lahontan in saying such vessels varied from 12 feet, holding two men, up to 40 feet, capacity 30? Bitternut hickory was a second choice after red-elm. He confirms our observation that the Iroquois took off a single piece of bark of the requisite length and width and removed the rough outer bark before shaping it into canoe form, and the illustration shows that the bark was reversed. The gunwales, for which he specifies white ash or other elastic wood the width of a hand, outer and inner, are lashed with single ties, stitched through and through the bark itself; but he does not specify what bark thread or twine and splints were employed as binders. In the specimen illustrated by Morgan, the two folds in the bark which give proper elevation to bow and stern are puckered at the fore and aft quarters, but are not folded toward the stern as in the Salem model. But like the Salem model, the thwarts occur at the quarters or creases, and in the center. Likewise, the stems are lashed in three places. The number of ribs remains small, 16 being illustrated, more than in the model, and Morgan writes that ribs are made of white ash, the same material as the gunwales, and they are set a foot apart. He is silent about the gear, but shows a number of short paddles, decorated in cross-hatch marks and in what appear to be effigies of animals, presumably clan eponyms. The handles of the paddles are not visible. What may be another set of paddles and what may be props project from the bow and stern. If these be braces to secure the elevation of bow and stern, they are not described. Elm and hickory bark canoes, Morgan remarks, are subject to warping; they were drawn out of water to dry, and with careful use lasted several seasons. While he confirms some of our observations on the model, had Morgan been familiar with canoes, he might have gathered a good deal more about construction, use, and care of elm bark canoes among the Tonawanda Senecas of his day. Dug-out canoes, however, were in use at Tonawanda,[9] and quite probably at Cattaraugus, as they were at Allegheny during the mid-nineteenth century.

[8] For a calendar of Morgan's field work, see W. N. Fenton, 'Tonawanda Longhouse Ceremonies: Ninety Years After Lewis Henry Morgan,' *Anthropological Papers, No. 15, Bureau of American Ethnology, Bulletin* 128 (Washington, 1941), pp. 140-146, footnote on pp. 148-149.

[9] H. M. Lloyd, the editor of the later editions of *The League,* includes in (1901 edition) Appendix B, II, 157, a letter from one of Morgan's friends telling how Morgan and a companion named

By 1912, when F. W. Waugh made studies of material culture on the Six Nations Reserve in Canada, the dug-out had long since supplanted elm bark canoes on the Grand River, and the dug-out in turn had given way to plank boats. Some memory, nevertheless, persisted among older informants of how bark canoes were made. The canoe birch is mentioned in Waugh's notes,[10] but the heavier elm bark was in more general use, and basswood bark, which had also been used on occasion, has the objection of leaking too easily. John Echo, the informant, said that bark comes off easiest in May and June, and he describes construction of a three or four thwart canoe, which has double gunwales, bound all the way around and cut off at the ends, where two other pieces were used to bind the bow and stern ends together; animal fat was placed between the folded ends of the bark to keep the water out. Echo stated that flooring was placed in the bottom to stand on. Later, he says that only one bent stick was placed in the middle to hold the vessel out to shape; but it is not clear whether he meant a rib or a single thwart. Echo confirms other observers that such canoes lacked seats, but occupants merely piled up some skins to sit on, or they kneeled. Although by itself Waugh's note by the old Onondaga John Echo has little merit, it confirms several points and adds only one new feature—flooring.[11]

Although the elm bark industry survived until recently among the Seneca on three reservations in western New York, only some terminology relating to canoes which derives from the manufacture of bark dishes, sap troughs, ladles, and cradle was obtained from Seneca informants on the Allegany Reservation. Even octogenarian Chauncey Johnny John who has proved a most dependable source on material culture has never seen a full-scale elm bark canoe, although he has seen many models. Most Seneca models of canoes in elm bark, however, seem to have been copied from Chippewa birch bark souvenir canoes; and they have the common defect of placing the rough outer bark in natural position. But since the construction of a canoe of elm bark does not differ fundamentally from making an elm bark bowl, it seems reasonable that the

Darling on a visit to Tonawanda in 1847 overset a dug-out in which they attempted to ferry over Tonawanda Creek.

[10] F. W. Waugh, Field Notes, MS., 1912, Notebook E, p. 22. Waugh also discussed the Iroquois elm bark canoe in an article: 'Canadian Aboriginal Canoes,' *Canadian Field-Naturalist*, XXXIII (May 1919 [11 August 1919]), 23-33. There he notes (p. 23) the close resemblance of the Mohawk and Onondaga terms for canoe to the term for bark bowl or trough.

[11] An elm bark canoe in the National Museum of Canada, collected by Waugh (?) at Tuscarora, Ontario, from Simeon Gibson and measuring 11′ 7″ long, 21″ deep, and 34″ beam, has the common defect of models, noted below, of leaving the bark in natural position—rough side out. (Information: Dr. H. B. Collins, Jr., 28 September 1948, and Douglas Leechman, p.c., 5 October 1948.)

techniques were similar and that much of the same terminology applies.

Canoes of yellow birch were very rare among the Seneca. If there was more than one type of bark canoe (gasnon' gaonwan'), Chauncey Johnny John thought that the elm bark canoe (gaongä' 'osnon' gaonwań') came after birch barks, only to be supplanted by the dug-out (geonda' gaonwán', *log boat*), which in turn was replaced by the plank Allegheny John boat. All Seneca informants agree that May-June was the best time to peel elm bark, and the late Chief John Jacobs, whose Indian name in the Bear clan strangely enough was 'Twenty Canoes (degaonwas' hen'), cautioned that great care must be exercised in selecting a tree that there are no flaws in the bark, and the diameter of the bowl determines the size of the vessel that can be constructed. The elm tree trunk was girdled at top and bottom, the distance between the cuts depending on the size of sheet desired. In making a canoe the trunk was girdled near the crotch and near the base. (It seems likely that some sort of staging had to be constructed for working high up on the trunk.) Next the cylinder of bark was slit vertically from the top cut to the bottom and a wooden spud made of hickory sapling sharpened to a chisel edge was inserted to peel the bark from the tree going around it. Several men worked together at removing the bark. That bark peeling was an ancient technique among the Iroquois is evident from the great variety of uses they made of bark—for house shingles, bowls, dishes, etc.—and from the fact that the Seneca took to the woods in great numbers to peel hemlock bark for the tanneries in the latter part of the nineteenth century. Chauncey Johnny John who has worked barking hemlock said that a wooden spud will not cut the bark as will steel which was used for hemlock. 'Elm bark peels best in the month of oyaikneh (June).'

Seneca informants do not know how a bark canoe was made, whether the ribs were put in afterward, and similar points. Chauncey Johnny John thought that gunwale should receive the same term as the rim of a basket or bark bowl (dewa'enón'ee, *double sticks, poles*), and that the rim should be bound with hickory rind (okaa' gawadaseé'). Next, he thought one could put in the ribs, which singly are called óyonskwa' as in mammals. He knew the term gá'seedon' for thwart, and specified one at each shoulder and one in the middle. He even thought that with suitable slippery elm bark he could make such a model.

It is interesting that this old Seneca feels that for every element in his material culture now made of other materials there was a bark prototype. His list includes the elm bark house, dishes, spoons (later made of

wood), boat, cradle, hickory rattle (which he thinks antedates the turtle rattle at least for the False-faces), and a mask of pigeon cherry bark.[12]

The time came when they could find no more bark suitable for canoe building. With steel axes they cut down the great pine (*Pinus strobus* L.), called 'o'só wä'; cucumber (*Magnolia acuminata* L.) geondaneekee; and white wood (*Liriodendron tulipifera* L.) 'oskáookh—the three kinds of timber of which they made the dug-out, or log canoe (geonda' ga'onwan'). Dug-outs were burned out before the introduction of the axe, and afterward when the maker lacked the proper steel tools of which the howel, or double curved adze, was the favorite on the Allegheny. But no dug-outs survived in Chauncey's time, which goes back to the lumber rafting period, when there were only plank boats on the upper Allegheny.

The linguistic evidence, for Seneca at least, provides another link in the chain connecting the elm bark canoe with the elm bark industry of the Iroquois. The term for boat or canoe—Kahonwea (Mohawk), gahonwa' (Onondaga of Six Nations, Waugh), gáonwan' (Seneca)—is close to that for bowl or bark dish, which has the intermedial glottal stop (ga'oń-wan'). Possibly, as Waugh has indicated, this parallel can be extended with data from the other Iroquoian languages.

Some Seneca terms follow for gear in the Salem model. Torch (gaa she'); instead of fat pine, Chauncey recalls that they used to get rough hickory bark and bundle up and tie about two handfuls to make a torch. Spear or lyster is gah'sigwää'; but a paddle for propelling a canoe is yegáwista' gagáwisa', or the reverse; two paddles, degagawi'sagee yegáwista'. Gaga'-wisa stands for paddle alone; contrast a paddle for stirring ashes (gagá-wisa' yongeondaǵwata') at the Midwinter Festival. References to paddling a canoe occur in songs: hadigaweenondye': he nongwe *they are paddling this way: those Indians*—is a favorite refrain in Warriors' Stomp Dance.[13] The same verb is involved in paddling (ii'gegaáwe *I am paddling*), but poling a boat (agegaawee). Most Allegheny boatmen prefer a pole to paddles, dropping down river and pushing back, and they are not expert with paddle. The pole is usually shod on one end with an iron

[12] 'One time,' he said, 'they went to the woods to hunt, I guess. They made a hickory bark rattle and a mask of pigeon cherry bark. Years after that they made masks of wood, and they made rattles from the snapping turtle. Lots of things have changed, you see. Years ago, they generally used bark for dishes, spoons, false-faces, etc.' Chauncey Johnny John, July 1948. Other information on the elm bark industry of the Seneca came from the late Henry Redeye and John Jacobs of Quaker Bridge, New York, and by observation at Tonawanda Reservation during protracted residence in 1935–1937.—W. N. F.

[13] W. N. Fenton, *Songs From the Iroquois Longhouse: Program Notes for an Album of American Indian Music From the Eastern Woodlands* (Washington: Smithsonian Institution, 1942).

shoe. Omitting the Seneca terms, the pole is variously a stick for moving a boat; a stick that serves as a cane for moving a boat; or a cane pole for paddling. The general word for cane comprises the stripped hickory saplings which the maskers carry and any type of walking stick favored by older men.

The characteristic red stripes with which the Salem model is decorated are the typical red paint that the Senecas use to daub their gear. The fact of painting red stripes on a boat was attested by a whole series of phrases in Seneca which we spare the reader:

We may now test these observations within certain limits imposed by the data available in historical accounts.

## III

From Champlain's time forward all observers distinguish between the birch bark canoes of the allies of New France, the Huron and Algonkin, and 'the enemy's canoes made of oak bark' and similar inferior materials. Champlain says that these oak bark canoes of the Iroquois, the Mohawk in fact, were each capable of holding ten, fifteen and eighteen men.[14] That these canoes were in fact of oak bark there remains some doubt. A better description is afforded by Radisson who while an enforced guest of the Mohawk during 1651 observed canoe making on two occasions, giving a fair idea of the labor involved and how rapidly construction was accomplished. He saw four men with great skill begin at noon and 'in less than two hours cut a tree and pull off the rind, of which they made the boat.'[15] Elsewhere, he says that on the spring hunt his party was occupied ten or twelve days making skiffs on the bank of a river (one of the tributaries of the Susquehanna) of the rind of *walnut* trees. 'We made good cheer and wished to stay there longer,' which shows that working coöperatively they enjoyed themselves, and in the space of ten or twelve days they made three skiffs to hold three men each, a smaller one to hold two men.[16] Thus eleven men in an equal number of days completed and launched four canoes; three days per canoe is a generous average. Although latterly Seneca ladies have made dishes of walnut bark, it does not seem likely that canoes were made of it. Radisson was not a botanist and he was hardly literate in English or French.

[14] H. P. Bigger, ed., *The Works of Samuel de Champlain* (Toronto: The Champlain Society, 1922-1936), II, plate V.

[15] *Voyages of Peter Esprit Radisson* (New York, reprinted from The Prince Society edition, 1943), p. 41.

[16] Ibid., p. 61.

Other French observers visiting the Seneca towns in La Salle's time mention canoes of various barks other than birch, which do not last as long as the canoes of the Algonkin.[17] Iroquois war canoes were, because of their design and large size, hard to manage and much slower than Algonkin craft, according to Baron Lahontan, but they were broad and long enough to accommodate thirty men, two abreast, who all rowed whether sitting or standing; but the vessel when loaded afforded so little free board that war parties dared not venture on a lake save in a calm.[18]

The Jesuit writers are a little more specific. Father Charlevoix, writing in his Journal in 1721, notes that elms are very plentiful all over this country (Iroquoia), that they are white and red elms, and although the wood is difficult to work it lasts longest. Recalling Morgan's statement and C. J. John, we read: 'The bark of the red elm is that of which the Iroquois make their canoes. Some . . . made of one single piece, will contain twenty persons. . . .' The size is consistent with Lahontan's probable exaggeration, but the red or slippery elm does not ordinarily attain to the size of the white elm, so that it is probable that the larger canoes were made of white elm. He goes on to say that elm bark canoes are wider (than birch barks) 'and of very coarse workmanship, but commonly the largest. I know of no nation but the Iroquois who have any of this sort.'[19]

In many ways the most satisfactory of the French writers, however he has been assailed as a copyist, is the Jesuit ethnologist Lafitau who, during the second decade of the eighteenth century, made his mission to the Mohawk at Caughnawaga, near Montreal. Lafitau distinguished two types of canoes: wooden and bark, and of the latter the Iroquois type contrasts poorly with the Algonkin birch bark. He wrote that wooden canoes were of no use on Canadian rivers, but they were found around villages for ferrying purposes and for freighting heavy things such as firewood and provisions.

[17] James H. Coyne, 'Exploration of the Great Lakes 1669-70 by Dollier de Casson and Brehant de Galinee: Galinee's narrative and map,' *Ontario Historical Society, Papers and Records*, IV (Toronto, 1903), 11. 'It is only the Algonkin-speaking tribes that build these canoes (birch barks) well. The Iroquois use all kinds of bark except birch for their canoes. They build canoes that are badly made and very heavy, which last at most only a month, whilst those of the Algonkins, if taken care of, last five or six years.' See also 'Relation de l'Abbe de Gallinee, 1669-70. Recit de ce qui passe de plus remarquable dans le voyage de MM. Dollier et Gallinee (1669-70)' in P. Margry, *Decouvertes et etablissements des Francais dans l'ouest et dans le sud de l'Amerique septentrionale. Premiere partie, 1614–1684* (Paris, 1875), p. 118. F. Parkman, *The Discovery of the Great West* (Boston, 1869), p. 181. Returning from the Illinois country in the spring of 1680, through the wilds of southern Michigan, '. . . they reached the banks of a river, probably the Huron. Here, while the sick men rested, their companions made a canoe. There were no birch-trees; and they were forced to use elm bark, which at that early season would not slip freely from the wood until they loosened it with hot water.'

[18] Baron Louis A. de Lahontan, *New Voyages to North America* (London, 2nd ed., 1735), I, 82.

[19] P. F. X. Charlevoix, *Journal of a Voyage to North America* (London, 1761), I, 249, 293.

But bark canoes were better suited to long voyages because they handle easily in rapids and on portage. While his description of birch bark canoes is not relevant to this paper, he states 'the Iroquois never make birch bark canoes, but they buy them from other tribes, or they substitute elm bark.' Later writers confirm his statement:

> The latter scarcely serve a single campaign, and because they are less solid than the others and because it is easier to replace the loss. They are of a single piece, and are made with all the slovenliness, and all the crudeness possible. They cut the bark at the four corners, where it is necessary to fold it back for making the folds, and after having stitched it in the corners, and at the two ends, which they make fast with split sticks [poles], to constrain it, and to keep it from opening up, they fashion the floor planking, the thwarts, and the gunwales of single branches of trees. These branches are only stemmed and so badly aligned, that the sight alone makes one squeamish, and ought naturally to inspire defiance in those, who risk their life in these contraptions on rivers as dangerous as those of Canada. However, they abandon themselves in them with a marvelous confidence in swift water, in rapids and in falls, by which they descend rivers, or which they stem with unbelievable exertion, poling.[20]

Four descriptions of elm bark canoes come down from the mid-eighteenth century: two accounts, Pouchot and Zeisberger, relate to the Seneca and their neighbors; Kirkland with Senecas shipwrecked in Lake Oneida, and the scene of the most complete account by Kalm took place at the end of the path leading from the Hudson to the Champlain Valley in Mohawk country. All of these writers are telling what they saw. Though Kalm is earliest (1749), we leave him till last because he answers most of the questions which seem pertinent to the reconstruction of the Salem model.

The Swiss officer, Pouchot, who saw service at Niagara after 1755 knew both birch and elm bark canoes and he sustains Lafitau in his estimate of the latter which he evidently watched in construction. He specifically states how the bark was removed in one piece, that the rough outer bark was rossed off, to make the inside of the canoe, and he is fairly clear about the relation of ribs to gunwales which were whipped with inner bast of elm. The item of the sail is quite new but will be sustained by Kirkland, and the method of righting and returning to an overset canoe is consistent with modern practice. He writes:

[20] J. F. Lafitau, *Moeurs des Sauvages Ameriquains* . . . (Paris, 1724), II, 213 ff., 213-217. A description taken almost verbatim from Lafitau appears in C. Le Beau, *Avantures du Sr. C. Le Beau* . . . , 2 vols. (Amsterdam, 1738), I, 99-100. Copy checked in the Rare Book Collection, Library of Congress.

Canoes of elm bark are not used for long voyages, as they are very frail. When the Indians wish to make a canoe of elm bark, they select the trunk of a tree which is very smooth, at the time when the sap remains. They cut it around, above and below, about ten, twelve or fifteen feet apart, according to the number of people which it is to carry. After having taken [it] off whole in one piece, they shave off the roughest of the bark, which they make the inside of the canoe. They make end ties [stem post binders] of the thickness of a finger, and of sufficient length for the canoe [gunwales], using young oaks or other flexible and strong wood, and fasten the two larger folds of the bark between these strips, spreading them apart with wooden bows [ribs and thwarts] which are fastened in[to the lisses (gunwales)] about two feet apart. They sew up the two ends of the bark with strips drawn from the inner bark of the elm, giving attention to raise up a little the two extremities which they call *pinces*, making a swell in the middle and a curve on the sides, to resist the wind. If there are any chinks, they sew them together with withes, and cover them with chewing gum which they crowd in by heating it with a coal of fire. The bark is lashed to the wooden bows [gunwales] with withes. They add a mast, made of a piece of wood, and cross piece to serve as a yard, and their blankets serve them as sails. These canoes will carry from three to nine persons and all their equipment. In these frail vessels they sometimes undertake voyages upon the lakes of a dozen leagues. They sit upon their heels without moving, as do also their children when they are in, from fear of losing their balance when the whole machine would upset; but this very seldom happens when struck by a gust of wind. Their paddles are four or five feet long. The sight of such a craft, which is only three or four inches out of the water, would surely frighten a European. If the canoe overturns, they turn it right by swimming, and they get in at one of the ends. When they land, they take great pains not to allow it to strike, by which it would be broken. They carry it on shore, and again put it afloat, when they embark. They use these vessels particularly in their war parties. They make them everywhere that they have occasion to go up or down rivers.[21]

Speaking of the Munsi-Delaware and the Iroquois outliers called Mingo, who about 1760 exercised political supervision over the former who were settled in towns along the Allegheny River in Forest County, Pennsylvania,[22] Zeisberger tells how hunters make a bark canoe for the purpose of bringing home meat.[23] The canoe was made rapidly by selecting a tree of the proper size and peeling the bark carefully to avoid rents in a single sheet. He says, 'These canoes are fashioned of one piece of bast, the outer side of which is turned inward . . . ,' but neglects to say that the rough

[21] P. Pouchot, *Memoir Upon the Late War in North America Between the French and the English, 1755–60* . . . , Franklin B. Hough, ed., 2 vols. (Roxbury, Massachusetts, 1866), II, 216-217. Hough's translation has been altered to agree with the original *Memoire sur la Derniere Guerre* (1781); both copies seen in the Rare Book Collection, Library of Congress.

[22] M. H. Deardorff, 'Zeisberger's Allegheny River Indian Towns: 1767–1770,' *Pennsylvania Archaeologist*, XVI, 1 (1946), 2-19.

[23] David Zeisberger, 'History of the Northern American Indians,' *Ohio Archaeological and Historical Quarterly*, XIX (Columbus, 1910), 23.

bark side was scraped or that the tree was elm. Both ends were sharply pointed and sewn securely with bast and the inside was 'stretched out by ribbing of bent wooden rods, which keep the canoe in proper form.' He contradicts others by holding that these craft were light upon the water and liable to glide out from under the unwary person trying to stand, but that they cannot capsize, being broad of beam and heavily loaded. What makes us think these were elm canoes is his remark that when punctured by floating drift wood, or stones, the Indians knew how to apply a bark patch. 'Besides, there is a kind-of elm-wood bast which they crush or pound fine and which is of a sticky consistency, serving them in place of tar, to keep their canoes water-tight. . . .' *Ulmus fulva,* slippery elm, must be involved. Although canoes were buried in the sand sometimes to preserve them, a canoe 'barely lasts more than a year.'

It is also clear that by the third quarter of the century bark canoes were on the way out. Steel tools enabled the Indians to hew out log canoes, so that when the Quakers came to the upper Allegheny just before 1800, the old elm bark canoes were a thing of the past. A century later the dugout had disappeared. It is most remarkable that Seneca informants at this late date have any cultural memory at all of bark canoes.

But making a canoe of bark was not always as easy a task as some writers would have us believe, and travel in a vessel of Iroquois manufacture was at best risky. The New England missionary Samuel Kirkland barely escaped shipwreck in Oneida Lake coming home in a bark canoe after having nearly starved in the Seneca country. His Journal for 1764-1765 states that about the middle of April he proposed to his Elder Brother that he, Kirkland, accompany him and his family by water to visit Sir William Johnson on the Mohawk.[24] We may attribute the delay in getting started partly to lack of nourishment which slowed up building a canoe and partly to the fact that bark does not peel easily in April.

> My Brother with his eldest son, and one of his young warriors set out to find a tree, which would make a bark canoe, sufficiently large to carry nine or ten persons, great and small. . . . Within about three days, the canoe was finished—My Brother having procured more help, [they] made greater dispatch than they at first expected, although they were obliged to roll the tree over a bed of hot coals to make it peel easy.

The company, consisting of two men, two women, three boys and

[24] Samuel Kirkland, *Journal: November 1764–June 1765.* The portion cited is from a typescript copy of a transcript of the original in the Buffalo Historical Society, corrected by comparison with the MS. at Hamilton College Library by J. D. Ibbotson. See also S. K. Lothrop, *Life of Samuel Kirkland Missionary to the Indians* (Boston, Library of American Biography, Jared Sparks, ed., 2nd series, vol. 15, 1848, 136-368), 186-190.

girls, and one young child, was six days paddling from Seneca Lake to Fort Brewington, at the west end of Oneida Lake. In crossing Oneida Lake, like Pouchot's travelers they made use of a blanket sail, but were soon overtaken by a high wind which the Seneca had predicted. In the wind of near hurricane force, the canoe sprang a leak and took water so rapidly that 'it required two hands constantly to bail out with kettles and dishes.' With difficulty Kirkland in the bow unstepped the crotched stick mast, nearly going overboard. Putting about, the canoe with difficulty rose to the swells, and the water ran pretty freely at the bow. The Indian Brother had turned quite pale at the thought of all his family aboard, and 'I . . . saw my Brother untying a squirrel skin, which contained his sacred or magic powder. . . . Two pinches of this powder he cast upon the water and called out, with an elevated voice and great earnestness . . . "Do your best, O wind, I say; now then pull hard O wind I say—you cannot conquer now." ' Kirkland also prayed. To the consternation of the Seneca the waves did not quell, the first time in his experience that the great good medicine had failed him.

> In a very short time the head of the Canoe, struck the sand upon the beach. All except his wife and a child or two sprang out and seized hold of the Canoe, to drag her up beyond the surf on dry land; just as we struck the shore her head burst or broke open from top to bottom—broke some and tore out others of the bark cords with which it had been sewed. Some were ordered to strike up a fire while others unloaded the baggage and untied various little packages and bundles. It was not long before they were hung around the fire to dry.
>
> After boiling the kettle . . . and [having] taken on refreshment, . . . My Brother and his eldest son set about repairing the Canoe, having their elm bark on board all prepared for the occasion. The canoe being repaired it was proposed to embark.

Such were the hazards of travel by elm bark canoe through the country of the Iroquois during the eighteenth century.

Certainly the most intellectually curious person to visit America at the mid-century was Peter Kalm, the Swedish botanist. Kalm was interested in everything that derived from the flora in America, and not the least of these was canoes.[25] Having observed that dug-outs were made of tulip around New York and to the south, he arrived in Albany, 13 June 1749, to note that white pine was the prevailing material. Unable to procure

[25] One of Kalm's students, Anders Chydenius, prepared a master's thesis on Indian birch canoes: *Americaniska nafwerbater* (Abo, J. Merkell, 1753). Copy in Rare Book Room, Yale University Library. A translation of this thesis was published by Ferdinand E. Chatard, 'An Early Description of Birch-Bark Canoes,' THE AMERICAN NEPTUNE, VIII, 2 (1948), 90-98. Adolph B. Benson, ed., *The America of 1750; Pehr Kalm's Travels in North America* (New York: Wilson-Erikson, Inc., 1937), p. 776. For Kalm's account of the bark boat, see pp. 363-365, and the events leading up to it.

either a batteau or a bark boat, he was forced to use a long white pine canoe in which he left Albany 21 June with a companion and two men, apparently not Indians, hired as guides to pole the canoe and pack baggage. They ascended the Hudson River, and the first Indians whom he mentions were an Indian woman and her boy whom he saw sitting in a boat of bark. An Indian wearing a great cap of bark was wading, apparently stalking sturgeon. At the sturgeon fishing camp which they visited on an island and which he describes, they tried to get an Indian to go along to St. Anne (Fort Anne) and help make a bark canoe. Kalm bargained for their services, but was outbid by an Englishman, and the Indians returned the advance made to them. So unless he procured another Indian later whom he does not mention, there was none in his party.

Having abandoned the pine canoe at Saratoga, they went overland to Fort Anne, where 27-28 June, one guide being ill, they were occupied the better part of two days, a half day on the twenty-seventh and all day the twenty-eighth, making an elm bark boat. At that only one of the party was an expert, and he comments that their progress was remarkable.

It suits our purposes best to treat Kalm's account, which runs for several pages, topically and only quote him on certain points. The American elm, which he says was abundant thereabout in the forest, was the material employed. White elm, so-called because the inside is white, was more plentiful than the red or slippery elm *(Ulmus fulva),* of which Morgan, Charlevoix, and Chauncey Johnny John said they made boats; but Kalm states that boats were more commonly made of the white bark. And they used hickory bark to sew the elm bark together. The bark of the red elm, however, they beat between two stones or two pieces of wood for caulking the ends of the boat, just as Zeisberger stated.

The method of selecting a tree and peeling the bark is clearly stated. A thick tall elm was selected for smooth bark and few as possible branches. Felling the tree was optional, if done with care to avoid other trees or injury on striking the ground. It was obviously easier to get the bark off once the tree was down, and that method was employed by Kirkland's Seneca when fire had to be applied. But Kalm's carpenter preferred what must have been the old Indian method of climbing the tree and slitting the bark and stripping it off.

> The bark is split on one side, in a straight line along the tree, as long as the boat it intends to be. At the same time the bark is carefully cut from the trunk a little way on both sides of the slit, that it may more easily separate. It is then peeled off very carefully, and particular care is taken not to make any holes in it. This is easy

when the sap is in the trees, and at other seasons, they are heated by fire for that purpose.[26]

Kalm's carpenter was working in June at the best season. He says, in fact,

The building of these boats is not always quick: for sometimes it happens that after peeling the bark off an elm, and carefully examining it, it is found pierced with holes and splits, or it is too thin to venture one's life in. In such a case another elm must be found; and it sometimes happens that several elms must be stripped . . . before one is found fit for a boat.[27]

In laying out the vessel, the bark was spread out smooth side down and it was weighted with logs and stones, but he neglects to say that the rough outer bark was rossed off.

Then the sides of the bark are gently bent upwards in order to form the sides of the boat. Some sticks are then fixed into the ground, at the distance of three or four feet from each other, in a curved line, which the sides of the boat are intended to follow, supporting the bark. . . . The sides are then bent in the form which the boat is to have, and according to that the sticks are either put nearer or further off.[28]

The ribs of hickory were apparently fitted before the gunwales had been lashed securely; they were set ten inches apart; Morgan said one foot.

Thick branches of hickory were cut down to flat pieces an inch thick and bent into the form of ribs, according to their intended place in the bow, quarters, or amidships. Formed, they were set on the bark in place.

Apparently the doubled gunwales were fitted but not firmly lashed in place before the ribs were set. Kalm says that before the bark was rimmed and sewed securely to the gunwales with bast of what he calls mouse wood (moosewood, *Dirca palustris*) or other tough bark or sewed with roots, 'the ends of the ribs are likewise put between the strips on each side, taking care to . . .' space them. 'After this is done, the strips are sewed together, and being bent properly, both their ends join at each end of the boat, where they are tied together with ropes.'

The thwarts, some three or four, were also made of hickory, and as in the Salem model, passed through the bark and around the gunwales to be firmly lashed against themselves.

It remained to caulk the ends with slippery elm paste.

[26] Ibid., p. 363.
[27] Ibid., p. 364.
[28] Ibid., p. 363.

Flooring is clearly specified, although missing in the Salem model. 'Some pieces of bark are put upon the ribs in the boat, otherwise the foot would easily pierce the thin and weak part below. . . . For the better security some thin boards are commonly laid at the bottom, which may be trod upon with more safety.'[29]

Remarking on the general character of the vessel, Kalm says: 'The side of the bark which has been used upon the wood, thus becomes the outside of the boat, because it is smooth and slippery and cuts the water with less difficulty than the other.'[30] He says that the boat which they made was adequate for four persons and their duffel, which weighed somewhat more than another man.

His concluding remarks about the general care of such vessels apply to the necessity of avoiding snags and the danger of puncturing the bottom on boarding and beaching the craft, particularly where rocks abound; they add nothing new to what is known of canoes generally.

Although the foregoing vessel was evidently built without Indian help, which they failed to enlist, it was done manifestly in the Indian manner by an experienced guide who knew the ways of the Mohawk Indians who were the principal carriers in the trade at the time between Albany and Montreal.

## IV

It should be apparent by now that the elm bark canoe in the Peabody Museum at Salem is of the same type as the early elm bark canoes of the Iroquois. What remains in doubt is just where did Major Enos Cutler collect it? His residency at Sault Ste. Marie from the autumn of 1823 until the summer of 1825, when he returned to Salem, would place the specimen in the canoe birch range of the Ojibwa country where craft of that material predominated, and, moreover, the other specimens which accompanied the elm bark canoe to Salem belong consistently to the culture of the upper Great Lakes area. The latter fact makes it increasingly unlikely that the specimen in question came from any of the trading posts dependent upon Sault Ste. Marie. While Cutler was commandant at Fort Brady, Henry Rowe Schoolcraft was Indian Agent at the Sault, and their combined post came under the jurisdiction of Detroit where Lewis Cass was Governor of the Michigan Territory. The Michigan Territory comprised Indiana and northern Ohio as well, including Fort Wayne and Sandusky. These places lie south of the canoe birch range, but elm

[29] Ibid., p. 364.
[30] Ibid.

abounds. The Sandusky Reservation sheltered a mixed lot of Cayugas, Mingoes, and Wyandots, but not many Senecas at this time, and their agent, John Johnston, reported to Cass; but what little we know of their culture does not distinguish it greatly from the Senecas at Buffalo Creek. In the absence of evidence to the contrary, it seems reasonable to assume that the elm bark canoe was collected by Cutler in passing through Detroit, from a trader or Indian of Sandusky, or for that matter at Buffalo Creek.

It is not impossible that the elm bark model was made by the Ojibwa who Jenness says often used an elm bark canoe for bringing in furs and meat.[31] But, if elm bark was an expedient material when the Ojibwa lacked birch bark, it also may be said, as Speck has stated, that the whole elm bark industry to the south, which is so conspicuous among the Iroquois but is shared by Central Algonquians, represents an extension of the finer birch bark industry of northern Algonquians in a different ecological setting.[32] Although no one has yet worked up a detailed comparison of the bark industry in the canoe birch and elm zones to Speck's satisfaction, it is interesting that Waugh, who had made field studies of material culture among the Montagnais in the birch zone and the Iroquois elm bark workers, noted in his paper on canoes that the Iroquois preferred the lighter, more substantial contrivance when it was available in trade.[33] And Waugh quite agreed with us and with Sapir, to whom we owe so many brilliant insights into American culture history, who perceived that the elm bark canoe represents a maladjustment of culture to its environment, being an imperfect copy in a characteristically Iroquois material of superior Algonquian types, and he connected this inference with a further general consideration, which we have already remarked, that the Iroquois are landsmen anyway.[34]

[31] D. Jenness, 'The Indians of Canada,' *Department of Mines, National Museum of Canada, Bulletin* 65, *Anthropological Series No.* 15 (Ottawa, 1932), p. 109.

[32] F. G. Speck, 'The Iroquois, a Study in Cultural Evolution,' *Cranbrook Institute of Science, Bulletin* 23 (1945), p. 43.

[33] F. W. Waugh, 'Canadian Aboriginal Canoes,' *Canadian Field-Naturalist*, XXXIII (May 1919), 24.

[34] E. Sapir, 'Time Perspective in Aboriginal American Culture, a Study in Method,' *Department of Mines, Geological Survey, Memoir* 90, *Anthropological Series No.* 13 (Ottawa, 1916), p. 20.

# *The Boston Merchant Fleet of 1753*[1]

BY MURRAY G. LAWSON

HISTORIANS, interested in tracing the development of the American mercantile marine from its beginnings in the colonial period to the present day, have from the very first observed that their task has been immeasurably complicated by the scarcity of reliable statistical data for the earlier period. As one of them has remarked somewhat sorrowfully, 'in spite of the wealth of literature dealing with the sea and ships, there is very little information about the size of the fleets of the seafaring nations of the world before the nineteenth century.'[2] It is the purpose of this article to furnish some of this missing statistical data in a series of tables, illustrative of various aspects of Boston's merchant fleet in the year 1753, such as its size, its composition, its age, its ownership, its place and date of construction, etc.

The source from which these tables have been constructed is the Massachusetts Naval Office Lists of Entries and Clearances for the port of Boston in the year 1753,[3] prepared under the direction of Benjamin Pemberton, the Naval Officer of Boston since 1734.[4] These Naval Office Lists are a prime source of data for a mercantile history of Boston, as they contain information regarding the date of entry or clearance, the type, name, tonnage, crew and armament of the vessel, the place and date of construction, the place and date of registry, the master's and owner's name, the cargo, the terminus and the place, date and amount of bond, if any, arranged in chronological order of entry or clearance. It should be noted, however, that the Naval Office Lists in themselves do not give the complete picture of Boston's maritime activities, as they do not include

[1] The data for this article was gathered at the University of California during the summer of 1946 while the author held the appointment of Research Associate in History.

[2] L. Isserlis, 'Shipping: Merchant Ships of the World,' *Encyclopaedia Britannica*, XX (14th ed.), 548.

[3] Colonial Office, Series 5, volumes 849 (1752-1756) and 850 (1752-1756). The originals are deposited in the English Public Records Office; however, a microfilm copy is in the possession of the University of California Library, where it was consulted by the author in preparation for this article.

[4] For a description of the duties of the Naval Officer see George L. Beer, *The Old Colonial System, 1660-1754*, I, 267-272 and Lawrence A. Harper, *The English Navigation Laws*, pp. 170-176.

any data pertaining to the fishing fleet or the vessels engaged in the intra-New England coasting trade, both of which were expressly excluded by law from the cognizance of the Naval Officer.

As can readily be seen, the untabulated form in which the above data appears seriously militates against its usability. In order that this information could be utilized most profitably it was found necessary to rearrange it in the form of a series of tables which would permit immediate reference. Disregarding the difficulty involved in deciphering eighteenth-century calligraphy, the central problem encountered in the compilation of these statistics was that of vessel identification. Seven different items—the kind, name and tonnage of the vessel, the place and date of construction and registry, the master's and owner's names—had to be correlated before one could be relatively certain of identification.

With one or two exceptions the first item, namely the kind of vessel, presented no special problem of identification. The second item, the names of the vessels, however, did, as our colonial forebears were not very imaginative in the bestowal of names. The 459 vessels which entered and cleared Boston in the year 1753 shared just 231 different names, and of these 80 names were shared by 308. For example, the name *Elizabeth* was borne by thirteen vessels; the names *Betty* and *Polly* by eleven vessels each; the name *Dolphin* by nine vessels; the names *Sally* and *Speedwell* by eight vessels each; the names *Endeavour, Hannah, Nancy,* and *Rebecca* by seven vessels each; the names *Abigal, Britannia, Charming Molly, Dove, Falmouth, Friendship, Mary,* and *Two Brothers* by six vessels each; the names *Betsy, Industry, Molly, Neptune, Peggy, Success,* and *Swallow* by five vessels each; and the names *Defiance, Dispatch, Lydia, Mermaid, Prosperity* and *William* by four vessels each.[5]

The third item, the tonnage, presented its own peculiar problem arising out of the colonial practice of understating the correct tonnage in order to evade the payment of lighthouse money and the various port charges levied upon the vessel's burthen.[6] More often than not this practice did not go by undetected, but occasionally it did escape the eye of the Naval Officer, resulting in a consequent confusion as to the correct

[5] To complete the picture we might add that sixteen other names were borne by three vessels each and thirty-five other names by two vessels each. It might be noted that the difficulty of identifying a vessel by its name alone was further enhanced by the occasional practice of the Naval Officer in recording only the first part of a double-barrelled name. For instance, the Snow *Boston Massachusetts,* mastered by Jonathan Stiven and owned by Thomas Greene, the Schooner *Mary Ann,* mastered by Reuben Chandler and owned by John Jones, the Sloop *Nancy and Sally,* mastered by Jonathan Grave and owned by John Harris, to mention just a few, occasionally appear as the Snow *Boston,* the Schooner *Mary,* and the Sloop *Nancy,* respectively.

[6] On this point see the testimony of Thomas Irving, the former Inspector General of Imports and Exports of North America, before a House of Commons committee in the year 1792. United Kingdom, *The Journals of the House of Commons,* 47 (1792), 357.

tonnage of a few vessels.[7] The rule of procedure adopted was as follows: (1) in the case of a vessel appearing more than twice, the discrepancy in tonnage was resolved by adopting the tonnage given in the majority of listings; (2) in the case where there were only two listings, the lower tonnage was the one accepted, despite the suspicion that naturally attached to it.

The fourth and fifth items, the place and date of construction and registry, raised a special problem in the case of only a few vessels.[8] This problem consisted largely of discrepancies in dates, which were resolved in accordance with the rule stated above. Only one discrepancy of minor importance appeared in the place of construction, but a few did with regard to the place of registry. Wherever the majority principle was inapplicable, a vessel was *ipso facto* suspect and not considered to be a Boston registered vessel.[9]

Items six and seven, the master's and owner's names, presented a somewhat more perplexing problem. In the case of the master's name this arose from the fact that 44 of the 351 Boston registered vessels experienced a change of masters, three of them actually changing masters three times within the year.[10] In the case of the owner's name the difficulty arose from the similarity of surnames. Almost a quarter of the owners (50), controlling more than a quarter of the vessels (91), shared among them a little more than one-eighth (23) of the 196 different surnames. The surnames Atkins, Bragdon, Browne, Fletcher, Grant, Jones, Mackey, Nicholls, Phillips, Prince, Quincey, Reed, Sheafe, Smith, Stevens, Torrey, Vinall, Walker, and Wells were each borne by two different owners; the surnames Boylstone, Davis, Doane and Kent were each borne by three different owners. A further difficulty was raised by a change in vessel-ownership. Although internal evidence is not conclusive, it is the author's belief that in the year 1753, eight vessels totaling 385 tons—one snow, 100 tons, three sloops, 90 tons, four schooners, 195 tons—changed hands. If such be the case, the Boston registered fleet of 1753 would consist of 343 not 351 vessels as appears in the accompanying tables. How-

[7] Only fourteen of the 459 different vessels entering and clearing Boston in 1753 raised this problem.

[8] Only twenty-one vessels presented this problem. It is interesting to observe that the 108 non-Boston registered vessels raised this problem in ten instances, whereas the 351 Boston registered vessels raised it in just eleven instances. Could it be that the native Bostonians were more closely scrutinized than 'foreigners'?

[9] Only two vessels were so affected.

[10] The Sloop *Bridgetown* of 45 tons owned by John Carnes was mastered by Peter Mortimer, William Meany and Arthur Dunn in succession; the Sloop *Elizabeth* of 40 tons owned by Edmund Morton was mastered by Edmund Morton, Enoch Taylor and Nathaniel Rae in succession; and the Schooner *Molly* of 35 tons owned by Thomas Foster was mastered by Isaac Dotten, Samuel Bartlett and Seth Barnes in succession.

ever, until further research can definitely establish the validity of the author's belief, it was decided to disregard these changes in ownership in computing the size and tonnage of Boston's merchant fleet in 1753.

## TABLE I

### Place of Registration of All Vessels Entering and Clearing Boston in 1753, by Kind[1]

| *Place of Registration* | *Ships* | | *Snows* | | *Brigs* | | *Sloops* | | *Schooners* | | *Total* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *BRITISH AMERICA* | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. |
| Boston | 34 | 4,502 | 41 | 3,615 | 47 | 3,101 | 107 | 4,638 | 122 | 4,743 | 351 | 20,599 |
| Nova Scotia | .. | .... | .. | .... | .. | .... | 2 | 80 | 1 | 30 | 3 | 110 |
| New Hampshire | 2 | 220 | 2 | 160 | 2 | 120 | 5 | 205 | 4 | 173 | 15 | 878 |
| Massachusetts[2] | 1 | 135 | 2 | 160 | 2 | 110 | ... | .... | 4 | 125 | 9 | 530 |
| Rhode Island | .. | .... | 2 | 130 | .. | .... | 5 | 140 | 4 | 195 | 11 | 465 |
| Connecticut | .. | .... | .. | .... | .. | .... | 4 | 82 | ... | .... | 4 | 82 |
| New York | .. | .... | .. | .... | .. | .... | 6 | 113 | ... | .... | 6 | 113 |
| Pennsylvania | .. | .... | .. | .... | .. | .... | 3 | 75 | ... | .... | 3 | 75 |
| Delaware | .. | .... | .. | .... | 1 | 50 | 1 | 15 | ... | .... | 2 | 65 |
| Maryland | .. | .... | 1 | 80 | 1 | 30 | 4 | 140 | 4 | 120 | 10 | 370 |
| Virginia | .. | .... | 1 | 80 | .. | .... | 8 | 307 | 2 | 75 | 11 | 462 |
| North Carolina | .. | .... | .. | .... | .. | .... | 3 | 140 | 1 | 40 | 4 | 180 |
| South Carolina | .. | .... | .. | .... | .. | .... | 3 | 130 | 3 | 95 | 6 | 225 |
| *BRITISH WEST INDIES* | | | | | | | | | | | | |
| Bermuda[3] | .. | .... | .. | .... | 1 | 40 | ... | .... | ... | .... | 1 | 40 |
| Barbados | .. | .... | 2 | 200 | .. | .... | ... | .... | 2 | 90 | 4 | 290 |
| St. Kitts | .. | .... | 1 | 50 | .. | .... | 1 | 50 | ... | .... | 2 | 100 |
| *BRITISH ISLES* | | | | | | | | | | | | |
| England | 7 | 1,319 | 4 | 342 | 2 | 160 | 1 | 140 | ... | .... | 14 | 1,961 |
| Scotland | .. | .... | 2 | 140 | .. | .... | ... | .... | ... | .... | 2 | 140 |
| Ireland | .. | .... | 1 | 60 | .. | .... | ... | .... | ... | .... | 1 | 60 |
| GRAND TOTAL | 44 | 6,176 | 59 | 5,017 | 56 | 3,611 | 153 | 6,255 | 147 | 5,686 | 459 | 26,745 |

[1] There was a total of 805 separate and different entries (324) and clearances (481) in the year 1753, exclusive of those of the vessels engaged in the fisheries and in the intra-New England trade.

[2] Exclusive of Boston.

[3] Technically not part of the West Indies, but so regarded for the purpose of this table.

## TABLE II

### Boston Registered Vessels, Entering & Clearing Boston in 1753, by Kind & by Year of Registration

| | *Ships* | | *Snows* | | *Brigs* | | *Sloops* | | *Schooners* | | *Total* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Date* | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. |
| 173? | 1 | 110 | .. | .... | .. | .... | ... | .... | ... | .... | 1 | 110 |
| 1738 | .. | .... | .. | .... | .. | .... | ... | .... | 1 | 50 | 1 | 50 |
| 1739 | 1 | 180 | .. | .... | .. | .... | ... | .... | ... | .... | 1 | 180 |
| 1743 | .. | .... | .. | .... | .. | .... | 2 | 85 | ... | .... | 2 | 85 |
| 1744 | .. | .... | .. | .... | .. | .... | ... | .... | 3 | 65 | 3 | 65 |
| 1745 | .. | .... | .. | .... | .. | .... | 1 | 60 | 1 | 30 | 2 | 90 |
| 1746 | 1 | 150 | .. | .... | 3 | 170 | 3 | 162 | ... | .... | 7 | 482 |
| 1747 | .. | .... | .. | .... | 1 | 75 | 4 | 195 | 1 | 100 | 6 | 370 |
| 1748 | 1 | 150 | 1 | 100 | 8 | 455 | 7 | 265 | 8 | 293 | 25 | 1,263 |
| 1749 | 3 | 510 | 2 | 190 | 3 | 230 | 7 | 315 | 9 | 410 | 24 | 1,655 |
| 175? | .. | .... | .. | .... | .. | .... | 1 | 45 | ... | .... | 1 | 45 |
| 1750 | .. | .... | 1 | 60 | 10 | 630 | 9 | 500 | 7 | 235 | 27 | 1,425 |
| 1751 | 3 | 340 | 9 | 825 | 3 | 180 | 21 | 910 | 9 | 393 | 45 | 2,648 |
| 1752 | 7 | 823 | 12 | 1,020 | 5 | 375 | 23 | 1,040 | 34 | 1,260 | 81 | 4,518 |
| 1753 | 17 | 2,239 | 16 | 1,420 | 14 | 986 | 29 | 1,061 | 49 | 1,907 | 125 | 7,613 |
| Totals | 34 | 4,502 | 41 | 3,615 | 47 | 3,101 | 107 | 4,638 | 122 | 4,743 | 351 | 20,599 |
| Average | | 132.4 | | 88.1 | | 65.9 | | 43.3 | | 38.8 | | 58.3 |
| Largest | | 300 | | 120 | | 100 | | 140 | | 100 | | 300 |
| Smallest | | 90 | | 50 | | 40 | | 20 | | 15 | | 15 |

# TABLE III

## Place and Date of Construction of Boston Registered Vessels Entering and Clearing Boston in 1753

| Date | BOSTON | | | | | | | | | | | | MASSACHUSETTS[1] | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Ships* | | *Snows* | | *Brigs* | | *Sloops* | | *Schooners* | | *Totals* | | *Ships* | | *Snows* | | *Brigs* | | *Sloops* | | *Schooners* | | *Totals* | |
| | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. |
| 1724 | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 20 | .. | .... | 1 | 20 |
| 1727 | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 20 | .. | .... | 1 | 20 |
| 1729 | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 25 | 1 | 25 |
| 1735 | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 20 | 1 | 20 |
| 1738 | 2 | 300 | .. | .... | . | .... | .. | .... | .. | .... | 2 | 300 | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 50 | 1 | 50 |
| 1739 | 1 | 180 | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 180 | .. | .... | .. | .... | .. | .... | 2 | 95 | 1 | 30 | 3 | 125 |
| 1740 | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 120 | .. | .... | .. | .... | .. | .... | 1 | 120 |
| 1742 | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... |
| 1743 | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 45 | 1 | 33 | 2 | 78 |
| 1744 | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 60 | 4 | 95 | 5 | 155 |
| 1745 | 1 | 300 | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 300 | .. | .... | .. | .... | 1 | 60 | 1 | 45 | 1 | 30 | 3 | 135 |
| 1746 | .. | .... | .. | .... | 1 | 50 | .. | .... | .. | .... | 1 | 50 | .. | .... | .. | .... | 2 | 120 | 4 | 192 | 3 | 80 | 9 | 392 |
| 1747 | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 100 | 1 | 100 | .. | .... | .. | .... | 1 | 75 | 4 | 130 | 2 | 105 | 7 | 310 |
| 1748 | 2 | 240 | .. | .... | 1 | 40 | 1 | 45 | 1 | 40 | 5 | 365 | .. | .... | 2 | 200 | 8 | 525 | 3 | 130 | 5 | 188 | 18 | 1,043 |
| 1749 | 1 | 120 | 1 | 90 | 1 | 80 | 1 | 60 | 1 | 50 | 5 | 400 | 1 | 300 | 1 | 100 | 3 | 200 | 13 | 496 | 12 | 515 | 30 | 1,611 |
| 1750 | .. | .... | 1 | 100 | 1 | 50 | 1 | 140 | .. | .... | 3 | 290 | .. | .... | 2 | 140 | 1 | 60 | 12 | 495 | 9 | 360 | 24 | 1,055 |
| 1751 | 2 | 215 | 4 | 350 | .. | .... | .. | .... | .. | .... | 6 | 565 | 2 | 230 | 2 | 205 | 4 | 245 | 8 | 355 | 8 | 365 | 24 | 1,400 |
| 1752 | 6 | 757 | 4 | 310 | 1 | 90 | 2 | 115 | 2 | 115 | 16 | 1,537 | 2 | 215 | 9 | 760 | 3 | 240 | 6 | 250 | 24 | 855 | 44 | 2,320 |
| 1753 | 8 | 985 | 9 | 785 | 7 | 441 | .. | .... | 4 | 165 | 28 | 2,376 | 5 | 550 | 4 | 365 | 4 | 330 | 7 | 270 | 21 | 717 | 41 | 2,232 |
| N.D.[3] | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... |
| | 23 | 3,097 | 19 | 1,635 | 12 | 751 | 5 | 360 | 9 | 470 | 69 | 6,463 | 10 | 1,295 | 21 | 1,890 | 27 | 1,855 | 64 | 2,603 | 94 | 3,468 | 216 | 11,111 |

| MAINE | | | | | | ALL OTHER PLACES[2] | | | | | | Grand Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Ships* | *Snows* | *Brigs* | *Sloops* | *Schooners* | *Totals* | *Ships* | *Snows* | *Brigs* | *Sloops* | *Schooners* | *Totals* | |
| 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 18 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 30 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 24 |
| 1 | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | 1 | 24 |
| 1 | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | 1 | 44 |
| 1 | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | 1 | 41 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 3 | .. | .. | .. | .. | 3 | 2 | .. | .. | .. | .. | 2 | 216 |

[1] Massachusetts, exclusive of Boston.

[2] Other than Massachusetts and Maine.

[3] Not determined.

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | 23 | 3,097 | 19 | 1,635 | 12 | 751 | 5 | 360 | 9 | 470 | 69 | 6,463 | 10 | 1,295 | 21 | 1,890 | 27 | 1,855 | 64 | 2,603 | 94 | 3,468 | 216 | 11,111 |

| MAINE | | | | | | | | | | | | ALL OTHER PLACES[2] | | | | | | | | | | | | Grand Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Ships* | | *Snows* | | *Brigs* | | *Sloops* | | *Schooners* | | *Totals* | | *Ships* | | *Snows* | | *Brigs* | | *Sloops* | | *Schooners* | | *Totals* | | | |
| V. | T. | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. | V. | T. |
| .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 20 |
| .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 20 |
| .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 25 |
| .. | .... | .. | .... | . | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 20 |
| .. | .... | .. | .... | .. | .... | 1 | 50 | .. | .... | 1 | 50 | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 4 | 400 |
| .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 4 | 305 |
| .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 120 |
| .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 35 | .. | .... | 1 | 35 | 1 | 35 |
| .. | .... | .. | .... | . | .... | 2 | 100 | .. | .... | 2 | 100 | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 4 | 178 |
| .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 5 | 155 |
| .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 4 | 435 |
| .. | .... | .. | .... | .. | .... | 3 | 120 | .. | .... | 3 | 120 | .. | .... | .. | .... | .. | .... | 1 | 50 | .. | .... | 1 | 50 | 14 | 612 |
| .. | .... | .. | .... | 1 | 70 | 5 | 215 | .. | .... | 6 | 285 | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 14 | 695 |
| .. | .... | .. | .... | 4 | 210 | 5 | 240 | 1 | 70 | 10 | 520 | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 20 | 1 | 20 | 34 | 1,948 |
| .. | .... | .. | .... | 1 | 45 | 2 | 80 | 7 | 310 | 10 | 435 | .. | .... | .. | .... | .. | .... | 1 | 30 | .. | .... | 1 | 30 | 46 | 2,476 |
| .. | .... | .. | .... | .. | .... | 4 | 185 | 1 | 30 | 5 | 215 | .. | .... | .. | .... | 1 | 70 | 2 | 65 | .. | .... | 3 | 135 | 35 | 1,695 |
| .. | .... | 1 | 90 | .. | .... | 4 | 215 | 2 | 105 | 7 | 410 | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 37 | 2,375 |
| .. | .... | .. | .... | .. | .... | 5 | 210 | 3 | 110 | 8 | 320 | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 68 | 4,177 |
| .. | .... | .. | .... | .. | .... | 1 | 30 | 2 | 90 | 3 | 120 | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 40 | 1 | 40 | 72 | 4,618 |
| .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | .. | .... | 1 | 110 | .. | .... | 1 | 100 | 1 | 50 | 1 | 30 | 4 | 290 | 4 | 290 |
| .. | .... | 1 | 90 | 6 | 325 | 32 | 1,445 | 16 | 715 | 55 | 2,575 | 1 | 110 | .. | .... | 2 | 170 | 6 | 230 | 3 | 90 | 12 | 600 | 351 | 20,599 |

[1] Exclusive of Boston.

[2] New Hampshire, three vessels totaling 155 tons; Connecticut, two vessels totaling 85 tons; New York, one vessel of 30 tons; Virginia, one vessel of 20 tons; South Carolina, one vessel of 20 tons; and French Prizes, four vessels totaling 290 tons.

[3] In the case of prize vessels data respecting the place and date of construction is by the very nature of things unavailable.

## TABLE IV

### Number of Voyages each Boston Registered Vessel[1] made in 1753

| *Number of Vessels* | *Number of Voyages* | *Totals* |
|---|---|---|
| 205 | 1 | 205 |
| 85 | 2 | 170 |
| 30 | 3 | 90 |
| 20 | 4 | 80 |
| 4 | 5 | 20 |
| .. | 6 | .. |
| 3 | 7 | 21 |
| 2 | 8 | 16 |
| 1 | 9 | 9[2] |
| .. | 10 | .. |
| 1 | 11 | 11[3] |
| Grand Total 351 | | 622[4] |

[1] That is only those Boston registered vessels which entered or cleared Boston in 1753.

[2] Sloop *Dolphin*, 35 tons, owned by Samuel Deming; four clearances to and five entries from Philadelphia.

[3] Sloop *Freemason*, 50 tons, owned by John Rowe; three clearances to and four entries from New York; one clearance to and three entries from Philadelphia.

[4] One hundred and forty-seven voyages were made by 108 vessels which were registered elsewhere than Boston.

## TABLE V

### Breakdown of Ownership of Boston Registered Vessels Entering & Clearing Boston in 1753

| *Number of Owners* | *Number of Vessels* | *Totals* |
|---|---|---|
| 158 | 1 | 158 |
| 39 | 2 | 78 |
| 12 | 3 | 36 |
| 9 | 4 | 36 |
| 4 | 5 | 20 |
| .. | 6 | .. |
| .. | 7 | .. |
| 1 | 8 | 81 |
| .. | 9 | .. |
| .. | 10 | .. |
| .. | 11 | .. |
| .. | 12 | .. |
| .. | 13 | .. |
| .. | 14 | .. |
| 1 | 15 | 15[2] |
| Grand Total 224 | | 351 |

[1] John Erving: two ships, four snows and two brigs, totaling 865 tons.

[2] William Fletcher: two ships, one snow, two brigs, nine sloops and one schooner, totaling 1,105 tons. It is curious to note that beginning with the Naval Office List for the year 1756 the name of William Fletcher no longer appears among the ship owners.

## TABLE VI

### Number of Boston Registered 'Owner-master Combination' Vessels, Entering and Clearing Boston in 1753

| *Kind* | *Number of Vessels* | *Tonnage* | *Average Size* |
|---|---|---|---|
| Ship | 1 | 139 | 139 |
| Snow | 4 | 335 | 83·7 |
| Brig | 3 | 145 | 48·3 |
| Sloop | 23[1] | 1,100 | 47·8 |
| Schooner | 11[1] | 437 | 39·7 |
| | 42[2] | 2,156 | 51·3 |

[1] Strictly speaking this figure ought to be reduced by 2, as during the course of the year two owner-masters presumably prospered sufficiently to hire masters to sail their vessels for them.

[2] Strictly speaking this figure ought to be reduced by 2, as during the course of the year two sloop owner-masters presumably prospered sufficiently to sell their sloops and purchase schooners in their place.

# *A Short History of the Los Angeles Steamship Co.: 1920-1930*

*BY JAMES M. MERRILL*

UNTIL the formation of the Los Angeles Steamship Co. in 1920, Los Angeles Harbor was without a successful steamship line. Vessels from other major West Coast ports, namely San Francisco and Seattle, were employed profitably in foreign trade. Los Angeles had grown tremendously, both in population and industry, since the turn of the twentieth century and its port provided a logical outlet through which its produce could pass.

The Los Angeles Steamship Co. was not the first to operate Los Angeles ships overseas. From 1919 until the depression of the early 1920's, the Los Angeles Pacific Navigation Co. dispatched freighters out of the area for the Orient. The Los Angeles Steamship Co., however, weathered this depression and played a significant rôle in West Coast and Hawaiian shipping. This was remarkable in that the company's founders had little experience in actual steamship operations. By 1930 this line was employing eleven vessels on three shipping routes. During this time the company had altered the unequal trade differential which existed between Los Angeles and other Pacific Coast ports, stimulated the previously torpid Los Angeles-Hawaiian trade, increased competition, advertised the Port of Los Angeles, and maintained a high standard of service aboard its vessels. In short the Los Angeles Steamship Co. gave the city its only major shipping line.

Prior to 1914 Los Angeles Harbor was a small coastal port. The bulk of its commerce was lumber imports from the Pacific Northwest. These meager facilities were due to the poor harbor conditions. With the construction of a deep water port at San Pedro and the opening of the Panama Canal, shipping services picked up. By 1914 five coastwise and six intercoastal steamship companies were making Los Angeles a regular port of call. When harbor development had become well advanced, World War I broke out in Europe. Its effect on Los Angeles Harbor was disas-

trous. Intercoastal service was abandoned, and several coastwise steamers were converted into naval transports.[1]

With the Armistice Los Angeles found itself in possession of a fine harbor, but with rather limited steamship facilities. After the war imports and exports had grown phenomenally, but none of this trade was carried in Los Angeles owned ships. Other ports were gathering the profits of the coastwise, intercoastal, and transpacific trade. To share in these earnings, Los Angeles businessmen realized they had to operate ships.

In April 1920 a group of Los Angeles capitalists, known as the Yale-Harvard Syndicate, purchased the former passenger vessels, *Yale* and *Charles* (ex-*Harvard*),[2] from the United States Navy.[3] On 10 June 1920 the syndicate incorporated under the name of the Los Angeles Steamship Co., familiarly known as the Lassco Line. Besides the material motive, the company was formed to promote commerce and to advertise the Port of Los Angeles. Of the seven original directors, only Ralph J. Chandler, who subsequently became vice-president and general manager, had previous shipping experience. The organizers planned to operate *Yale* and *Charles* in the Los Angeles-San Francisco trade and later to extend service to Hawaii or the Far East.[4]

Lassco's coastwise service became famous through the employment of the two 'white flyers of the Pacific.' Launched at Chester, Pennsylvania, in 1906, *Yale* and *Harvard* originally plied between New York and Boston, but were later chartered to the Pacific Navigation Co. for the San Francisco-Los Angeles run. When the United States entered World War I, the steamers were purchased by the United States Navy and used in the transchannel service between Le Havre and Southampton. They earned a notable war record. Each made 166 round trips and transported approximately 500,000 soldiers without loss of life.

*Charles,* which shortly afterwards was renamed *Harvard,* arrived in Los Angeles from the East Coast on 10 July 1920; *Yale,* two days later. The Los Angeles Shipbuilding and Drydock Corp. and the Ralph J. Chandler shipyards contracted to overhaul the two vessels. The ships' engines were completely overhauled; their social halls were rebuilt; and the passenger quarters of each vessel were remodelled to accommodate

[1] Robert Glass Cleland, *California in Our Time (1900–1940)* (New York, 1947), pp. 111-114; and Clarence Matson, *Building a World Gateway: The Story of Los Angeles Harbor* (Los Angeles, 1945), pp. 38-46; 93-98; 112-113; 176-177. [Hereafter cited as *Building a World Gateway.*]

[2] These steel-hulled, steam driven ships measured 376.0 x 61.3 x 20.2 feet. They registered 3,818 gross and 514 net tons, and 10,000 horsepower (shaft).

[3] Los Angeles *Times,* 21 April 1920. [Hereafter cited as *Times.*]

[4] Ibid., 28 May, 11, 25 July 1920.

480. Observers believed that when reconditioning work was complete, the ships would be 'comparable with the best vessels of the Atlantic service and superior to anything heretofore known to Pacific waters.'[5]

On 2 May 1921 *Yale,* amid the most remarkable celebration of its kind in the history of Los Angeles Harbor, departed on her maiden voyage to San Francisco. When she steamed into the outer harbor, the United States Navy battleships saluted with sirens and fog horns, while their bands played lively airs. *Yale* was escorted to sea by the destroyer *Banning* and two submarine chasers in appreciation of her war service.[6]

Two months later, on 5 August, *Harvard* sailed for San Francisco on her inaugural run, which had been delayed because of a labor dispute. With this departure the Los Angeles Steamship Co.'s coastwise service became fully established. In 1921 few steamship lines were operating a coastwise passenger run to Los Angeles Harbor. The best known was the Pacific Steamship Co.

The voyages up and down the California coast during the 1920's could not be termed exciting. Lassco ships sailed from Los Angeles Harbor on Tuesdays, Wednesdays, Fridays, and Saturdays at 4:00 P.M., and arrived in San Francisco the following day at 10:00 A.M.[7]

On 22 June 1922 the coastwise service was extended to San Diego because of the demand for through travel from San Francisco and Los Angeles to the border city. The southbound ship, arriving in her home port Thursday mornings, departed at 3:00 P.M. the same afternoon for San Diego. The five-hour daylight trips grew in popularity, and by 1925 the schedule included four round trips to the southern city.[8]

Although the freight business aboard *Yale* and *Harvard* was important and advertised as the '24-Hour Service from Store Door to Store Door,' emphasis was put on the passenger trade. The company announced in August 1922 that *Yale* and *Harvard* were carrying capacity passenger lists on nearly every trip. The week-end voyages to and from San Francisco

[5] During the reconditioning period each ship's cargo spaces were enlarged to handle 1,000 tons of freight. On the gallery deck, forward, an enclosed glass observation salon was built; aft, a veranda cafe-ballroom. On the boat deck, amidships, bachelor rooms with single brass beds and showers were installed. Large de luxe suites were located abaft the observation room, while other accommodations were provided on the gallery deck, aft, and on 'C' Deck. For the personal comfort of the passengers a barbershop, beauty salon, and valet service were installed. See ibid., 27 March, 21 April, 11, 25 July, 7 August 1921; and *Pacific Marine Review: The National Shipping Magazine,* XVIII (1921), 329-330. [Hereafter cited as *Pac. Mar. Rev.*]

[6] *Times,* 3 May 1921.

[7] In 1922 *Harvard* broke existing Lassco speed records when she made the southbound trip in 16 hours and 34 minutes, an average of approximately 21.1 knots for the 347-mile run. See *Pac. Mar. Rev.,* XIX (1922), 494.

[8] *Times,* 21, 22, 23, 24 June 1922.

were in such demand that improvised cots were installed in the social halls to accommodate voyagers.[9] The increased travel soon warranted the addition of another vessel. In March 1923 the Los Angeles Steamship Co. purchased the steamer *Waimea* (ex-*City of Topeka*),[10] from the Inter Island Steam Navigation Co., Ltd., of Honolulu. Built at Chester, Pennsylvania, in 1884 for the Santa Fe Railroad, the steamer was to be used as an auxiliary for Lassco's coastwise run. *Waimea* had first-class cabin accommodations for eighty passengers. She did not, however, measure up to the high standards of *Yale* and *Harvard*. With her schedule calling for one round trip a week, *Waimea* made her initial departure on 24 May 1923.[11] Although Lassco officials alleged that the ship was proving popular,[12] she was placed on an inactive status in early 1924. Until the Los Angeles Steamship Co. merged with the Matson Navigation Co. of San Francisco in 1930, the steamer lay idle in Los Angeles Harbor.

In discussing the coastwise passenger service, it is necessary to mention several factors which popularized the trips. Several are obvious. The speed and regularity of the ships' schedules were comparable to those of the railroads. Many passengers enjoyed the change of environment and sea travel. The first major factor which added materially was company advertising. Besides magazine and newspaper advertisements, the company distributed many well-illustrated pamphlets and instituted a slogan contest in 1921. Although the advertising was extensive, other policies contributed to the popularity of the '*Yale* and *Harvard* Way.' These included all-inclusive tours to San Diego and northern California points, and open houses aboard the ships when they were in port. The company also altered its schedule slightly to include special events, such as football games, in San Francisco and Los Angeles.[13]

Such policies stimulated travel aboard the two steamers. By 1930 passenger traffic had reached a point where additional tonnage was necessary. Plans were developed for the construction of two fast vessels to supplement *Yale* and *Harvard* at a cost of $3,500,000 each.[14] These proposals, however, did not materialize.

[9] Ibid., 1, 17 August 1922.

[10] The iron-hulled, steam driven ship measured 198.0 x 35.2 x 18.0 feet. She registered 1,057 gross and 746 net tons, and 800 horsepower (indicated).

[11] *Times*, 15 March, 23 May 1923.

[12] *Pac. Mar. Rev.*, XX (1923), 392.

[13] Ibid., XXI (1924), 15; *Times*, 8 September, 9 October, 13 November 1921, 7 June 1925, 15 May, 30 October 1927, 6 July 1928; and Los Angeles Steamship Co. pamphlet, *3 Days or Weeks. A Vacation to fit every Holiday Schedule* (Los Angeles, n.d.).

[14] *Times*, 27 May, 23 June 1930; and *Pacific Shipper: Weekly Compendium of Pacific Coast Shipping*, 2 June 1930, p. 5. [Hereafter cited as *Pacific Shipper*.]

After the Lassco-Matson merger the two ships continued in the coastwise trade until 1931. In May of that year *Harvard* went aground off Point Arguello near Santa Barbara, California. Although there was no death toll, the steamer was a total loss. The passenger vessel *Iroquois*[15] was chartered to run opposite *Yale*, but was unable to maintain the schedule. She was turned back to her owners after six months. *Yale* did not resume service after the Maritime Strike in 1934, and was later sold to house war workers on Puget Sound.

Another major shipping service, which the Los Angeles Steamship Co. established, was to the Hawaiian Islands. This started in 1922 with the sailings of the passenger liners, *City of Los Angeles* and *City of Honolulu*. At the time Los Angeles had no particular ties with the islands. For generations Hawaii had close commercial and cultural relations with San Francisco. The Bay Area felt that the Hawaiian trade was its private preserve, and its supremacy went almost undisputed.[16]

In 1920 Hawaii was enjoying a 'commercial prosperity unprecedented in all her history.'[17] Trade with the mainland exceeded $250,000,000 a year, more than half of which was island exports. Passenger travel to the islands, which had been curtailed during the war years, also increased. Although many Southern Californians vacationed in the islands and Los Angeles produced Hawaiian exports, the city had practically no hand in this traffic.[18]

By 1919 shipping facilities to Hawaii had not kept pace with its growth. During this early postwar period three major American shipping lines operated a passenger service to Honolulu, the Matson Navigation Co., the Pacific Mail Steamship Co., and the Oceanic Steamship Co. Only the first maintained regular weekly sailings to and from Hawaii. These services, however, were not adequate to meet the growing demand, and businessmen recognized the opportunity for Los Angeles interests.[19]

In the early 1920's there was a movement to establish a Los Angeles-Honolulu route. With the aid of the Los Angeles Chamber of Commerce, the Lassco Line obtained two passenger liners, *Huron* (ex-German *Fried-*

[15] This steel-hulled, steam driven ship measured 394.7 x 62.2 x 19.4 feet. She registered 6,209 gross and 3,405 net tons, and 8,500 horsepower (indicated).

[16] Matson, *Building a World Gateway*, p. 194; and *Southern California Business*, V (1926), 20, 22. [Hereafter cited as *South. Calif. Bus.*]

[17] Thomas G. Thrum, comp., *Hawaiian Almanac and Annual for 1921. The Reference Book of Information and Statistics Relating to the Territory of Hawaii, of Value to Merchants, Tourists and Others* (Honolulu, T. H., 1920), p. 123.

[18] *Times*, 13 February 1921; and *South. Calif. Bus.*, I (1922), 7.

[19] *Times*, 24 April 1921, 7 February 1922; and *South. Calif. Bus.*, I (1922), 18-19, 22, 24-25.

*rich Der Grosse*) and *Aeolus* (ex-German *Grosser Kurfurst*),[20] from the United States Shipping Board in December 1921. 'My associates and myself,' declared Fred L. Baker, then president of the Los Angeles Steamship Co., 'secured these two steamships for this service because we felt that . . . trade conditions both of Southern California and of the Hawaiian Islands had reached the stage where they demanded direct connection.'[21] The islands were enthusiastic about the proposed route. Lassco's agent in Honolulu said that there were '250,000 people in Hawaiian Islands willing and anxious to have us supply the majority of their needs.'[22]

*Huron* and *Aeolus* were well-suited for the Hawaiian run, as they were originally built for the North German Lloyd's tropical service. When World War I broke out, the liners were seized by the United States Navy and placed in transport work. After the Armistice the ships were reconditioned and allocated to the Munson Line for the South America trade.[23] In July 1922 *Huron* and *Aeolus,* renamed *City of Honolulu* and *City of Los Angeles,* respectively, entered the Los Angeles Shipbuilding and Drydock yards for overhaul.[24]

On 11 September the *City of Los Angeles* departed for the islands, inaugurating Lassco's Hawaiian service. Although the company planned to operate its vessels only between Los Angeles and Honolulu, this first trip included stops at Hilo, Hawaii, and Kahului, Maui. On the eighteenth, seven days out of Los Angeles Harbor, the liner stood into Hilo. After visiting Kahului the following day, *City of Los Angeles* arrived in Honolulu on the twentieth, amid whistles, band music, outrigger canoes, and airplanes overhead.[25] On 23 September the ship sailed for home.

[20] *Huron,* built at Stettin, Germany, in 1896, measured 523.0 x 60.1 x 34.8 feet. The steel-hulled, steam driven ship registered 10,688 gross and 6,240 net tons, and 8,000 horsepower (indicated). Launched at Danzig, Germany, in 1899, *Aeolus* measured 560.4 x 62.3 x 19.9 feet. The steel-hulled, steam driven vessel registered 12,642 gross and 6,992 net tons, and 4,192 horsepower (indicated). After the installation of new machinery in 1924, *Aeolus'* engines developed 12,000 horsepower (shaft).

[21] *South. Calif. Bus.,* I (1922), 19.

[22] *Times,* 17 April 1922.

[23] Ibid., 2 December 1921, 13 March 1922; *Pac. Mar. Rev.,* XIX (1922), 74; and North German Lloyd, *70 Years North German Lloyd Bremen, 1857–1927: A Short History of Bremen's Ocean Traffic* (Berlin, n.d.), p. 53.

[24] During the reconditioning period the *City of Los Angeles* was equipped with social rooms and recreational facilities, which made the ship attractive to passengers. On the boat deck, aft, were the gymnasium and swimming pool. The music room, children's playroom, smoking room, open air veranda were located on 'B' Deck; the main lounge and library, on 'C' Deck. The dining saloon, which could accommodate all first class passengers at one time, was situated on 'D' Deck. Somewhat similar arrangements were worked out aboard *City of Honolulu.* See Los Angeles Steamship Co. pamphlet, *Los Angeles to Honolulu on Government Ships* (Los Angeles, n.d.); and *Times,* 18 July 1922.

[25] *Times,* 21 September 1922.

On the same day *City of Honolulu,* commanded by Captain H. R. Lester, departed from Los Angeles Harbor. She arrived in Honolulu on the thirtieth. A week later the liner was homeward bound with 262 passengers and crew members. Five days out from Honolulu disaster overtook the ship. At 4:00 A.M. on 12 October 1922 fire from an undetermined origin broke out in an unoccupied stateroom. *City of Honolulu* was approximately 600 miles from the nearest point on the Pacific Coast in 31° 07′N, 131° 40′ W. Within a few hours the ship was ablaze. At 8:00 A.M. Captain Lester gave the abandon ship order, and a half hour later the passengers were being lowered in lifeboats to the accompaniment of jazz music. Shortly after 10:30 A.M. 20 lifeboats, with all passengers and crew members, were clear of the burning vessel.

The freighter *West Faralon,* operated by Struthers and Barry, Inc., was fifty miles away when she picked up *City of Honolulu*'s SOS. The freighter arrived at the scene at 2:45 P.M., and an hour later all castaways were aboard. The United States Army Transport *Thomas,* en route to San Francisco, had reversed course and arrived alongside *West Faralon* at 11:00 P.M. At dawn on the thirteenth the victims were transferred to the transport, which arrived in Los Angeles Harbor two days later.[26]

Credit for the well-organized escape must be given to Captain Lester and the ship's crew, who did everything possible to save *City of Honolulu.* Panic was averted and everyone aboard was safely cleared from the burning liner through superior seamanship. 'The wreck of the [*City of*] *Honolulu,*' declared one witness, 'appeared so well regulated . . . that it appeared to have been rehearsed for a motion-picture stunt.'[27]

Simultaneously with *Thomas'* arrival in Los Angeles Harbor, the Shipping Board allocated *President Harrison* (ex-*Wolverine State*)[28] to the Los Angeles Steamship Co. as a temporary stop-gap. The passenger vessel, launched in 1921 at Camden, New Jersey, had been employed in the Oriental trade by the Pacific Mail Steamship Co. On 23 October 1922, carrying a capacity passenger list of eighty-four, *President Harrison* departed for Honolulu two days late on Lassco's regular semi-monthly schedule.[29]

For a permanent replacement the company purchased the United

[26] On 17 October 1922 *City of Honolulu* was deemed a 'menace to navigation.' The U. S. Coast Guard cutters, *Tamoroa* and *Shawnee,* sunk the liner by gunfire in 32° 20′ N, 129° 45′ W. For details of the fire see ibid., 13, 14, 15, 16, 17 October 1922; New York *Times,* 13, 14 October 1922; and *Pac. Mar. Rev.,* XIX (1922), 691.

[27] *Times,* 16 October 1922.

[28] This steel-hulled, steam driven ship measured 502.1 x 62.2 x 28.3 feet. She registered 10,504 gross and 6,242 net tons, and 7,000 horsepower (indicated).

[29] *Times,* 22 October 1922.

States Army Transport *Sherman* (ex-British *Mobile*)[30] in November 1922. Built at Belfast, Ireland, in 1893, she had been employed on the San Francisco-Manila run and was often referred to as 'one of the most historic craft in the Pacific.'[31] The ship, renamed *Calawaii,* was placed in the Los Angeles Shipbuilding and Drydock yards, where her passenger quarters were torn out and rebuilt to accommodate 178 first class and 52 third class voyagers. These spaces, the lounges, and other social sections were completely refurbished to meet the company's high standards.[32] On 10 February 1923 *Calawaii,* commanded by Captain Lester, sailed for Honolulu. Meanwhile, *President Harrison* after completing four round trips, was turned over to Swayne and Hoyt, Inc.

With *Calawaii* in service Lassco's Hawaiian schedule was not altered except for overhaul periods. Ships departed from Los Angeles Harbor every second Saturday. *City of Los Angeles,* the faster of the two vessels,[33] arrived in Honolulu the following Friday; *Calawaii,* on Saturday.

The year 1924 witnessed the addition of a new feature to the Los Angeles-Honolulu route. Its purpose was to stimulate tourist travel and to obtain money-producing ballast for return trips to the mainland. On 19 July, when *City of Los Angeles* departed for Hawaii, her itinerary had been expanded. After three days in Honolulu the liner, sailing the picturesque windward north coast of Molokai, entered Kahului at 2:00 P.M. on the twenty-eighth. Departing the same evening, the vessel stood into Hilo the following morning at 8:00. After a full day at this city, she sailed for Honolulu, arriving there on the thirty-first. *City of Los Angeles* then had two days to load cargo before sailing for the mainland.[34] When *Calawaii* took departure from Los Angeles Harbor on 2 August, the new service had become fully established.

Because of the increased freight and tourist traffic, the Los Angeles Steamship Co. purchased the passenger ship *President Arthur* (ex-German *Kiautschou,* ex-German *Princess Alice,* ex-*Princess Matoika*)[35] from the Shipping Board in August 1926. An apparent motive for this was Matson Navigation Co.'s $7,000,000 liner *Malolo,* then under construction at the

[30] This steel-hulled, steam driven ship measured 445.0 x 49.2 x 30.0 feet. She registered 7,270 gross and 4,165 net tons, and 3,500 horsepower (indicated).

[31] *Times,* 22 November 1922.

[32] Ibid., 1 February 1923 and *Pac. Mar. Rev.,* XX (1923), 59.

[33] In September 1924 the ship traversed the homeward route in 5 days, 15 hours, and 27 minutes. See *Times,* 6 September 1924.

[34] Ibid., 19 July, 1, 2, 8, 9 August 1924; and Honolulu *Advertiser,* 26, 28, 29 July, 1 August 1924.

[35] This steel-hulled, steam driven ship measured 523.5 x 60.1 x 18.9 feet. She registered 10,680 gross and 6,308 net tons, and 9,000 horsepower (indicated).

Cramp yards, Philadelphia. She was to have a speed of 20 knots, which would enable her to make the Hawaiian run in four and a half days.

Built at Stettin, Germany, in 1900, *Kiautschou* was originally used on the North German Lloyd's Oriental run. When the United States entered the war, the ship was interned at Manila, Philippine Islands, and was subsequently converted into a naval transport. After the Armistice the liner, rechristened *President Arthur,* was operated by the United States Lines in the transatlantic trade.

On 24 September 1926 the vessel, renamed *City of Honolulu,* arrived at her new home port. Entering the Los Angeles Shipbuilding and Drydock yards, she underwent $1,500,000 worth of repairs. With the exception of the engines and propeller shafting, everything in the hull was torn out. Accommodations for 445 first class and 50 third class passengers were built in.[36] On 4 June 1927 *City of Honolulu,* the 'most admirably equipped, luxuriously furnished and well-planned vessel to operate in Pacific service,' departed on her maiden voyage.[37]

A fourth ship was added when the company purchased the freighter *West Erral*[38] from the Shipping Board in November 1927. Rechristened *Diamond Head,* the vessel sailed from Los Angeles Harbor on 4 February 1928 for Honolulu. Part of her first cargo consisted of livestock and polo ponies. This well illustrated Lassco's need for a freighter, as these items were taboo aboard the passenger ships.[39] *Diamond Head's* departure inaugurated weekly sailings from Los Angeles to the islands.

During the years that followed, this schedule met with little change. In 1930, however, disaster again overtook Lassco's Hawaiian fleet. On 25 May *City of Honolulu,* commanded by Captain George Zeh, was gutted by fire while she lay tied up to Pier 8 in Honolulu. The flames were discovered on 'B' Deck at 3:45 P.M., when only part of the crew was aboard. They battled the blaze, but this soon proved impractical. The alarm for shore fire apparatus was turned in at 4:10 P.M., and every available fire department in the city was rushed to the scene. Army and Navy equipment from Fort Shafter and Pearl Harbor, four Young Brothers' tugs, and two harbor fire boats soon arrived to render aid. By 3:00 A.M. on the twenty-sixth the fire was extinguished.[40]

[36] *Times,* 23 September 1926, 15 May, 4 June 1927; and *Pac. Mar. Rev.,* XXIV (1927), 261-269.

[37] *Times,* 4 June 1927.

[38] This steel-hulled steam driven ship measured 410.0 x 54.4 x 27.2 feet. She registered 5,603 gross and 3,465 net tons, and 3,500 horsepower (indicated).

[39] *Times,* 3 February 1928.

[40] Ibid., 26, 27 May 1930; and Honolulu *Advertiser,* 26, 27, 28 May 1930.

After a thorough survey had been completed by salvage experts, plans for rebuilding *City of Honolulu* were abandoned. The fire damage was much greater than first expected. On 21 June, when salvage reports had been analyzed, Lassco's directors decided to turn *City of Honolulu* over to the underwriters as a total loss. Later the company repurchased her for $135,000.[41] Meanwhile, the line's intercoastal freighter *Marian Otis Chandler* was placed temporarily in the Hawaiian service.

At this point mention should be made regarding passenger and freight traffic to the islands. The Lassco Line, declared Hawaiian Governor Wallace R. Farrington, 'has put Hawaii on the map as a resort of unequalled scenic charm. It has made the tourist business one of the real big enterprises of Hawaii.'[42] In the 1920's the tourist traffic to the islands grew tremendously. While the Los Angeles Steamship Co. received its share of this trade, its biggest competitor, the Matson Line, showed a slight decrease. In 1927 Lassco was carrying 32% of the total Hawaiian tourists as compared to Matson's 29%. This situation, however, did not last. By 1928 *Malolo* was maintaining her regular schedule to the islands. With this liner in operation, Matson's passenger figures showed a marked increase over those of Lassco.[43]

Passenger traffic alone would not make the service profitable. Freight consignments had to be obtained. Although the statistics on Lassco ships are not available, the yearly commercial tonnage through the Port of Los Angeles will put light on the subject. The company's vessels, with the exception of oil tankers, were the only direct connection between Los Angeles and the islands. In 1920 the Hawaiian traffic with the harbor was negligible, but in 1930 500,000 tons were shipped to and from the islands at a value of approximately $21,000,000. Although San Francisco's Hawaiian trade greatly exceeded this figure, it is interesting to compare the rate increases. Over the last five years of Lassco's existence, 1925-1930, Los Angeles Harbor showed a Hawaiian import-export business that had nearly doubled, while San Francisco showed a slight decrease.[44]

41 *Pac. Mar. Rev.*, XXVII (1930), 311, 453, 497.

42 *Times*, 26 June 1927.

43 For statistical information regarding the Hawaiian tourist trade, see Honolulu Chamber of Commerce, Hawaii Tourist Bureau, *Annual Report of Executive Secretary, Hawaii Tourist Bureau. For the calendar year ending December 31, 1925* (mss. Hawaii Visitors Bureau, Honolulu, T. H.). The same report for years 1926–1930.

44 For Hawaiian tonnage passing through the ports of San Francisco and Los Angeles, see City of Los Angeles, Board of Harbor Commissioners, *Annual Report of the Commerce Passing Through the Port of Los Angeles for the Fiscal Year Ending June 30, 1920* (Los Angeles, 1920). The same report for years 1921–1930; and State of California, Board of Harbor Commissioners, *Biennial Report of the State Harbor Commissioners for the Fiscal Years Commencing July 1, 1918, and Ending June 30, 1920* (Sacramento, 1921). The same report for years 1922–1932.

The late 1920's witnessed the Los Angeles Steamship Co.'s entrance into the 'stormy commercial sea' of the intercoastal trade with Sudden and Christenson, shipping agents. The agreement called for a joint intercoastal service to be maintained under the designation of the Arrow Line.[45] Lassco freighters, *General M. H. Sherman* (ex-*Mursa*), *Marian Otis Chandler* (ex-*West Haven*), *Helen Whittier* (ex-*West Lianga*), and *Constance Chandler* (ex-*West Hosokie*)[46] which had been purchased from the Shipping Board in early 1929, were employed in this work. The schedule called for stops at Baltimore, Norfolk, Savannah, and Jacksonville on the Atlantic Seaboard, and at major ports on the Pacific Coast. Eastbound freighters carried lumber; westbound, general cargo. The first Lassco ship to make the run, *Marian Otis Chandler,* arrived in Los Angeles Harbor on 24 April 1929 with a full cargo. This run, however, did not prove remunerative and was discontinued in 1934.

The Los Angeles Steamship Co. reached its peak of operation in 1929. Instead of expanding its services, the line merged with the Matson Navigation Co. in October 1930. The alleged purpose of this work was to make further development and expansion possible through the combination of the competing lines' resources. 'It is the feeling of our board of directors,' said one Lassco official, 'that the consolidation . . . will prove of far-reaching benefit to the ports of San Francisco and Los Angeles.'[47]

Besides this altruistic motive there were other causes for the consolidation. *Malolo* had become popular on the Hawaiian run. *City of Los Angeles* and *Calawaii* were old, and could hardly approach *Malolo* in speed or modern convenience. Further, the Matson Co. was building three more passenger ships, *Monterey, Mariposa,* and *Lurline* (III), for transpacific service.

A study of the Los Angeles Steamship Co.'s financial position discloses another reason. Passenger and freight traffic for the years 1925-1929 increased substantially. Earnings were put back into the company. But it is apparent that the company over-expanded when it financed the purchase and reconditioning of *City of Honolulu* (II) through short term credit. Since no long term provisions had been made, Lassco was in an unfavorable position to meet a depression.[48]

[45] This agreement was approved by the Shipping Board on 24 April 1929. For details, see New York *Times,* 25 April 1929; *Pac. Mar. Rev.,* XXVI (1929), 29; and *Times,* 6 February 1929.

[46] These steel-hulled, steam driven freighters measured approximately 409.0 x 54.0 x 27.0 feet. They registered 6,000 gross and 3,500 net tons, and 3,000 horsepower (indicated).

[47] *Times,* 31 October 1930.

[48] For company balance sheets, see John Sherman Porter and others, eds., *Moody's Manual of Investments and Security Rating Service. Industrial Securities, 1927* (New York, 1927). The same publication for years 1928–1930.

The merger of the two steamship companies was announced publicly on 30 October. With regard to organizational policy, Lassco managed the combined interests in Southern California, while the Matson Line took care of operations in the north. The merger was consummated through an exchange of securities, the exact terms of which were not published. For Los Angeles Harbor, the new Hawaiian schedule called for regular sailings of both *City of Los Angeles* and *Calawaii,* while *Malolo* was to sail for Honolulu once a month from the port. Newspapers of San Francisco, Los Angeles, and Honolulu were happy about the arrangement. 'The cooperation between the fleets of these companies,' a Los Angeles *Times* editorial declared, 'means more business for California's two principal ports . . . and forfeits none of the advantages.'[49]

In 1932 *City of Los Angeles* and *Calawaii* were put in an inactive status. Both of these ships, together with *City of Honolulu,* were later sold to Japanese steamship interests for scrap. In September 1933 *City of Honolulu,* which had been reconditioned to make the transpacific crossing, and *Calawaii* sailed for Osaka, Japan. They were followed in 1937 by *City of Los Angeles.*

The 1930 merger concluded Los Angeles' first successful shipping enterprise. Although Lassco was in existence as an independent line only ten short years, it was significant in Pacific Coast and Hawaiian shipping. The company had accomplished its purpose despite obstacles. Although it is approximately nineteen years since the Los Angeles Steamship Co. was an independent line, its influence is discernible today. Matson ships continue to make schedule stops at Los Angeles Harbor. Lassco steamers proved it profitable to operate ships out of the Port of Los Angeles.

[49] *Times,* 1 November 1930.

# *Documents*

## Deposition of Nelson Tefft and Others of the Whale-Ship *Brooklyn*,[1] 1847.

[From the collection of the contributor.]

The Deposition of Nelson Tefft, Carpenter of the Whale-ship *Brookline*,[1] in the case of Captain Samuel Jeffrey of the Port of New London, vs Joseph C. Dunforth, Cooper of the *Brookline*, 28 July 1847.

I Nelson Tefft of the Town and County of New London and the State of Connicticut of lawful age being first duly examined & sworn according to law doth testify and say.

That I was Ship keeper on board of the Ship *Brookline* of the Port of New London of which Captain Samuel Jeffrey was Master during the early part of the voyage now not completed. The cooper was at work building a fresh water tank and I was sitting on the Carpenters work bench abaft the tri-works and Captain Jeffrey was was altering the cabin making it larger, he sent up the Cabin boy to the Cooper and told him he wanted his axe, the cooper Joseph C. Dunford said the axe was on the carpenters work bench or some where around, he said take it and carry it down to him and tell him not to cut nails with it, and that he the cooper wanted to use it presently, if he cuts nails with it and spoils it he will have to buy a new one, it was the only axe on board the ship, what the boy said in the cabin I do not know—the Capt came on deck, asked the cooper, asked the Cooper how he dared refuse him the ships tools, the Cooper told him he had not refused him the ships tools. The Capt told the Cooper Mr. Dunford that he was a damned liar, Dunford said he was not a liar, Capt Jeffrey said he was a damned lying s— - - -—, that he was anything but a man, if he was a man he would give him a damned good thrashing, Dunford said he beleived he was a man, what little there was of him. The Capt told him he was a damned lying good for nothing — - - -— and jumped and catched hold of him, one hand hold of the hair of his head and made a blow at him and catched him, Dunford by the whiskers. Mr Dunford turned around, Capt Jeffrey hit his (Jeffrey) legs against the tool chest which lay across the deck and fell over and hauled Dunford on top of him and then told Dunford to let him get up and Mr. Dunford told him to let go of his hair and he might get up and Capt Jeffrey told Mr Dunford a second time to let him get up and called him a damned stinking ———— and at that Capt Jeffrey made a yank of his hair and whiskers with both his hands, Mr. Dunford then got up from off him and Capt Jeffrey then told him to go to his work, Mr. Dunford told him he would. Mr. Dunford told him if he had done anything out of the way to seize him up and flog him like a man, Jeffrey told him he did not think it worth his while and jumped on him again and caught him by the hair of his head a second time and pulled his head down, Mr. Dunford told him a second time if he had done any thing out of the way to seize him up and flay him like a man and not to use him that way like a brute. Capt Jeffrey damned him and gave him a cutting blow with his knuckles down the side of his head and told him that was the kind of usage he would give him the remainder of the cruise. Capt Jeffrey told him not to go down to his cabin again for if

[1] The ship *Brooklyn* (spelt incorrectly *Brookline*) was a 360-ton ship registered from New London and sailed from that port for the 'India Grounds' and the North West on 7 July 1845. She was owned by Perkins and Smith and was commanded by Samuel Jeffrey. She sent home 14,495 pounds of bone and brought home 160 bbls. of sperm oil, 3840 bbls. of whale-oil and 3000 lbs. of whale-bone. She arrived at her home port on 6 April 1848.

he did he would choke him to death. Mr. Dunford told him he did not wish to go to his cabin if he didnt wish for him to and that he could live in the Steerage —that is all I know.

On board of the Ship *Brookline,* Samuel Jeffrey Master in the latitude of about 42 N., on the 8th. day of August 1846.

We the undersigned in part of the crew of the Ship *Brookline* do and are willing to testify before any United States Consulate or and Magistrate at home to the undermentioned facts to which we were witnesses and we are willing to certify that we see the Capt go up to the Cooper while engaged at his trade and take hold of him by the throat and thereby choke him and also strike him in the face a dozen times with his fists and we also see him take hold of him by the whiskers and tear them out by the roots at the same time calling him a s---- and swearing that was such usage as he was going to give him as long as he was on the ship, during the melee the Capt swore by God that he would kill him, to the above we willingly certify:—

W. N. Laurence. New York.
Nelson Tefft. his X
Edwin Atkinson. Liverpool.
J. O. Williams. London.
Joseph H. Perkins.
Samuel N. Watrous.
Lorenzo D. Perkins.
Wilson Glasenger.
John Williams. Joseph C. Dunford.
Cooper of the Ship
Brookline.

*Contributed by E. Lee Dorsett.*

## Schooner Building in Wisconsin, 1874

The following letter written by Lambert Nau to his partner, Captain Pet Peterson, chiefly concerns their schooner *Annie M. Peterson,* which they launched the same year in Green Bay, Wisconsin. The *Annie M. Peterson,* a three-masted topsail schooner measuring 190.5 x 33 x 13 feet, 631 tons, was a fine example of the best schooners built in this period for the grain trade, and was well known all over the Great Lakes as a smart fast vessel. A tremendous number of schooners were built on the Lakes in 1873 and 1874 as a result of good times and high freight rates in the early seventies, but the trend had already reversed itself at the time this letter was written. Money certainly seems somewhat tight, to judge from Mr. Nau's preoccupation with the dollar and the wasteful tendencies of his cooks.

The original letter is owned by George Nau Burridge, Green Bay, Wisconsin, great-grandson of Lambert Nau, and is published by his permission.

### Letter from Lambert Nau to His Partner, Captain Pet Peterson, May 24, 1874

Capt. Pet Peterson
Dr Sir

The charts have not come yet. Math Miller gave me a scolding today that we never have his capstan and chain returned and he would make us pay for—. I was ashamed myself and by looking after it found it broken and had it fixed up. Could not go to see Mrs. Tank about letting it to Andrew Johnson yet because I have not money to pay her up. Received $500 from the *City*[1] but paying iron bills, Cleveland, Chicago, Dr. King, and all the hungry wolfs was gone before I got half around.

We are all well here and your folks all right. Schooner *L. Anderson* will sail tomorrow Shingles 20C, also Schr. *Cuba* light from Detroit, Pig Iron and Shingles. Sch. *Hippogriff* had over 300 M staves $1300 frt, coal up at 70¢— been loading 4 days but only cost her $45 all boys. I wished we had taken staves loaded to 12 feet might have made at least $2000 frt and less expense than the Shingles, ther are a good many who would like some but they are all given out at present. I thought even about the *City* to get some staves for her but could not.

G. D. Norris & Co.'s bill is $10,488.53 and in their letter they said they expect us to pay some cash and balance as soon as we could. They left the interest matter until they had a settlement. They agreed to sell us No. 1 canvas at 62¢ and Manila 17½, but had given us the benefit of the decline, making the price of canvas 62¢ for No. 0 or 60 for No. 1 and 16½ for manila. Anchors and chains could have been furnished less this spring but from apearance last fall it did not look like this, and they had considerable stock from last fall declined on their hands. I have

[1] Schooner *City of Green Bay,* built Green Bay, Wisconsin, 1872, by L. Nau.

shipped back to them all there was here and wrote them right after coming home from Chicago as good a letter as I could, that I only knew about any agreement for Outfit by their letter to us from Sept. 8th and from what you told me as you did understand them when in Milwaukee last winter, but of course I excused myself best I could, telling them that I was sorry we could not make any payment just now but hoped to be able to do so soon and asked them to be as easy as possible with terms and interest and I promised to be as prompt about as possible to make all satisfactory.

Their answer next day came with statement of the whole bill as you will see below. They said in letter Sept. 8th that interest would commence Janry 1st/74 providing outfit was furnished last fall that they wrote us again Sept 30th that as outfit was not required until spring interest on account would be in same proportion as the time stated in letter of Sept. 8th. They were furnishing 15 new vessels this year and most of them had paid some cash down, and they charge interest from May 1st June 1st according to amount paid down. They say that you must have misunderstood them, that they could not remember having told you anything about interest, but you that as far as paying was concerned they would give us the whole season. They should be happy to be able to let the account run the whole summer without interest, but don't see how it can be done and still leave them some fair profit. They had no objection to take our notes payable at stated time if we prefer to do so rather than remit when we could.

Well I replied again that their statement with last letter was all received and satisfactory and that we should do our best to make payment as soon and fast as possible. and prefer to do this than give our notes in those time.

The statement says:

Sch. A. M. Peterson in account with G. D. Norris & Co.

| | | |
|---|---|---|
| 1873 | | |
| Oct 28 | Mdse pr bill ( Anchors chains, etc. el) | $2634.16 |
| | Interest from Janry 1st, 74 | |
| | Balance of outfit furnished this Spring per bill rendered | 7854.37 |
| | | 10488.53 |
| | Interest on balance from July 1st, 1874 | |

I asked Capt O L Aga if he knew a good Cook to tell Mr. Williams that you could get him when you got back and I hope you do find one as Brown is not good. I think he wasts too much and will soon spoil the good worth in the Cabin—don't think much of Berwin either is to liberal inviting to dinner etc does the same with the Cooks.

I had a letter from Hood that they wanted to make valuation $42000 but that he told them vessels were built now at 90¢ and everything lower and I answered him that Spears here says that the *Doane*[2] only cost $37-38000 and outfit $10,000—but I was disgusted with the insurance co's and like him to do the best he could. Young Kimball is after me again about insurance and I feel ashamed and do not know what to say—he got $12000 on the L. Anderson from June 1st at 15% down.

The painter Norman insulted and tried to scare me for the full $20 and went twice to sue me and next day tried again and I rather settled at $18000.

I will enumerate some of their prices, all they have come down a little is on Canvass and Manala. I have sent the large purchase blocks back.—they charged us:

| | |
|---|---|
| 1 double and triple 20 in. purchase blocks | 65.00 |
| 1 18in Snatch Block | 16.20 |
| 2 heavy mast winches | 100.00 |
| 10,900 in. Wire rigs 13½ | 1471.50 |
| 822 in. Steel wire 32 | 263.04 |
| 44¼ days fitting $4.50 | 199.12 |
| New York bill for Blocks | 785.01 |
| 1 suit colors | 140.00 |
| Fore sail 660 yds No. 0 62 | 409.20 |
| Mainsail 646 yds No. 0 62 | 400.52 |
| Mizzen 352 yds No. 2 58 | 204.16 |
| 1 Marine glass | 21.00 |
| Jib 150 yds No. 0 62 | 97.96 |
| Flying Jibs 228 yds No. 2 58 | 132.24 |
| Fore gaff topsail 264 yds #4 54 | 142.56 |
| Mizzen gaff topsail 126 yd #6 54 | 63.00 |
| Main " " 254 yd. #4 54 | 137.16 |
| Jib Topsail 240 yds #4 54 | 129.60 |
| Forestaysail 165 yds No. 0 62 | 102.30 |
| Square Sail 698 yds 5 52 | 362.96 |
| Raffee 185 yds 6 50 | 92.50 |
| Hatch Covers 87 yds 2 54 | 46.90 |

I wanted to tell yet that the cook used up or wasted a whole jar lard in the one trip.

Truly Yours,
(L. Nau)

2 Schooner *J. W. Doane*, built Little Sturgeon Bay, Wisconsin, 1874, by Spears.

*Contributed by Henry N. Barkhausen.*

# *Book Reviews*

W. J. Lewis Parker, *The Great Coal Schooners of New England, 1870-1909* (Mystic, Conn.: The Marine Historical Association, Inc., 1948). 7″ x 10″, paper. 139 pages, 22 illustrations, 2 folding plates. $2.00.

In all the modern revival of interest in sailing ship lore, scant attention has been paid to the schooners which were once so large a factor in our coastwise commerce and in the industrial development of New England. Despite the vital rôle of our coastwise trade, 'because it lacked the romance of far ports and rich cargoes it has been uniformly ignored by maritime writers'—ignored, that is to say, until the publication of what Lieutenant Parker modestly refers to as his 'essay.'

This is a scholarly work prepared originally as a thesis for a master's degree at Columbia, yet its academic origin is well concealed. The prose is highly readable, the sequence logical, and the copious notes, appendices, and bibliography serve only to enhance the value of the book to the serious student without detracting from the enjoyment of the more casual reader. The selection of illustrations is commendable and the folding plates showing hull, spar, and cabin plans are of special interest.

In preparation for his definitive examination of the coastwise transportation of coal by the schooner fleet, the author outlines briefly yet adequately the sad situation of American shipping following the close of the Civil War. 'The Civil War gave rise to a period of industrial expansion and internal development and . . . we turned our backs on the sea.' Yet this expansion of industry, particularly the New England textile industry, was to a large degree responsible for the continuance of wooden shipbuilding and the employment of larger and larger schooners for coastal commerce. Having outgrown the capacity of water power the new mills depended upon steam and this in turn called for ever increasing quantities of coal from Philadelphia, Baltimore, and the Hampton Roads ports.

Thus was created a renewed demand for the products of Maine shipyards and the master builders fell eagerly to the task of developing the type of sailing vessel best suited to the needs of the day. The progression finally reached its climax in 1909 with the launching of the six-masted collier schooner *Wyoming,* the largest wooden sailing vessel ever built.

While the evolution of the great coal schooners of New England is well detailed, this is no mere recital of names of vessels. The trade is described in an absorbing chapter carrying the reader over sailing routes commonly followed on the coast to and from the various coal ports. The crews, afterguard, and the life aboard are thoroughly examined, while dangers and mishaps are recounted in another fascinating chapter.

It is in the story of the management and economics of the coal schooners that this book reaches its full stature. The author has probed deeply into the operation and management of the coal fleet and pointed up the economic factors responsible

for the development and decline of the sailing colliers. It is to be hoped that this analysis of the coal trade may lead to similar studies of the transportation of lumber and ice in which schooners figured prominently until twenty-five years ago.

While the Marine Historical Association is to be congratulated on the publication of this important contribution to maritime literature, it is unfortunate that this non-commercial sponsorship will doubtless preclude the extensive distribution which the book deserves.

SIR WESTCOTT ABELL, *The Shipwright's Trade* (Cambridge: University Press; New York: The Macmillan Company, 1948). 219 pages, 19 plates, 53 figures. $4.50.

A careful and thorough study of the shipwright's trade has long been wanted by students of maritime history. Many times exact data about the hours of labor, the pay, working conditions, tools, relative degrees of efficiency and a dozen other elements are wanted but short of long search are unobtainable. There is need for a book which would do for the working shipwright what Sir Charles Oman's *Art of War* did for the soldier. Perhaps it is too much to expect of one man or of one book: certainly the one under review does not even begin to serve as an introduction. It attempts to cover the whole period from Creation to 1485, world-wide, in twenty-four pages; eighty-two are devoted to the years from 1485 to 1837, and ninety-eight bring the study to 1946. Practically all the 1485-1946 pages are given to British developments without regard to the undeniable fact that the Spaniards, the Dutch, the Swedes, and the French, perhaps even a North American or two, made some contribution to the trade.

The book progresses from wood to iron and then to steel construction with appraisals and comments on the theories and work of Baker, the Petts, Deane, Brunel, Scott Russel, Reed, Froude, etc., and closes with muddy descriptions of present day shipbuilding practices in Britain's merchants and naval yards. Many of the major developments and personalities are entirely neglected. The best portions are the extensive quotations and reproductions of drawings from Matthew Baker's *Fragments of Ancient Shipwrightry,* ca.1586 and Anthony Deane's *Doctrine of Naval Architecture,* 1670. These make us wish the author had published them in full and skipped the rest.

GEORGE S. WASSON, *Sailing Days on the Penobscot: The Story of the River and the Bay in the Old Days.* With an Introduction and Epilogue by Walter Muir Whitehill (New York: W. W. Norton & Company, Inc., 1949). 5¾" x 8½", cloth. 246 pages, 34 illustrations, end-paper map. $4.00.

This book was first published in 1932 in a small edition and since then all of us who love the Maine coast, the memory of the coasters, pinkies, and other vanished craft, and the memory of the men who sailed them, have been beholden to George S. Wasson for writing it. Now Norton's has made it available for a far wider group of readers to enjoy.

The book remains today, as when it was first written, the best work on the lumbering and coasting trades, so important economically to the coastal region for the

seventy-five years previous to the first World War. The book has become also, in reality, a minor classic, for not only was Wasson sound historically, but he knew whereof he wrote, and he wrote extremely well. Much of the charm of the work lies in Wasson's knowledge of the local idiom, with its archaic words, shades of meaning, and aptness of description, which he could use like the native he was, and combine with a good literary style.

The hazards of navigation on the coast, and particularly on 'Bangor River,' are related with an intimacy that could only be acquired by practical experience. The picturesque craft, from the two- and three-masted schooners, pinkies, Friendship sloops, St. John wood-boats, and steamers down to the yawl boats and 'peapods,' and the trades and industries in which they were employed are all described. And then there are character sketches of the men who sailed the vessels and knew the fog infested coast, and all its rocks, reefs, and 'gunk holes.' Especially pleasing is the chapter on the Isle au Haut fishermen and the account of life on that isolated and lonely island before the 'rusticators' came. The chapter on smugglers and wreckers is a frank record of activities on the coast too often glossed over. Smuggling of profitable goods across borders has always gone on, and probably always will, and it is doubtful if the wrecking activities were any more reprehensible than those on other remote parts of the Atlantic seaboard.

In the Introduction to this edition Mr. Whitehill gives a delightful sketch of Wasson's life which lends understanding to Wasson's own pages, and in the Epilogue tells of his death in 1932 and the launching of the Liberty ship *George S. Wasson* from the South Portland yard of the New England Shipbuilding Corporation in 1943.

This is a good book—a salty literary meal and one of which we shall partake often and abundantly.

SAMUEL WARD STANTON, 'Steam Navigation on the Carolina Sounds and the Chesapeake in 1892,' *Steamship Historical Society of America Reprint Series No. 4* (Salem: Steamship Historical Society, c/o Peabody Museum, 1947). 8½″ x 11″, paper, iv + 31 pages, illustrations, indexed and with a foreword by Alexander Crosby Brown. 50 cents.

A review of J. H. Morrison's 'Iron and Steel Hull Steam Vessels' (THE AMERICAN NEPTUNE, VI [1946], 235-236), third in the series of reprint publications brought out by the Steamship Historical Society, cited that type of publication as being of particular usefulness. It gives us pleasure to record that the fourth title in the same series continues a function which the Society is particularly well qualified to perform. In the present instance, Mr. Alexander C. Brown, the same compiler, has unearthed a similarly unknown series of five articles from *Seaboard* of April, May and June 1892, written by the late Samuel Ward Stanton, an authority on steam navigation of equal stature to Morrison. Some three years prior to the publication of his well-known book, *American Steam Vessels,* Mr. Stanton, who was an editor of the weekly New York marine journal *Seaboard,* embarked on a postman's holiday and came south via Old Dominion Line to Norfolk. After noting what went on in that bustling port, he boarded another Old Dominion vessel for the voyage down to

Albemarle and Pamlico Sounds and returning took a daylight side trip up the James River before proceeding north via the Old Bay Line to Baltimore.

Since only the Old Bay Line survives today and accounts of steam navigation are particularly scarce for the Carolina Sounds, the articles that Stanton prepared on his return are not only interesting, but also of considerable historical value. The Steamship Historical Society is to be congratulated for giving them a new circulation. The republication here has been effected by facsimile lithoprinting, the copy having been clipped and remounted in double-column form, thus providing a conveniently sized publication which would have been unmanageable in the three-column original. A more uniform clarity has been attained in this than in the previous reprint and Mr. Stanton's meticulous pen-and-ink sketches, numbering almost forty, are reproduced with reasonable clarity.

Again we express the hope that the Steamship Historical Society will continue this, its most useful function, and that the Reprint Series will grow rapidly.

JOHN C. EMMERSON, JR., [Compiler], *The Steam-Boat Comes to Norfolk Harbor, and the Log of the First Ten Years: 1815-1825* ... (P. O. Box 112, Portsmouth, Virginia: The Author, 1949). 5½" x 8½", paper covers, 455 pages, facsimiles. $6.00.

THE AMERICAN NEPTUNE, IX (1949), 78, carried a review of Mr. Emmerson's industrious labor to transcribe all mention pertaining to steam navigation which appeared in early Norfolk newspapers. This was prepared in typescript and copies deposited in half a dozen Virginia libraries. Since that time, however, Mr. Emmerson was persuaded that this important work should have a wider audience and the present publication is a lithoprint facsimile by Edwards Brothers, Inc., reduced in size but not in clarity, available from him at the address given above. THE AMERICAN NEPTUNE considers this publication a model of usefulness and hopes that it will soon be followed by a second volume which the compiler promises to cover the decade 1825-1835.